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FOR

INSTRUCTORS OF BLIND CHILDREN

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AN EXPERIMENT IN INDIVIDUAL INSTRUCTION IN ALGEBRA IN A SCHOOL FOR THE BLIND

Dale W. Hamilton

The development of intelligence tests and standard tests of many kinds has directed the attention of educators anew to the problem of individual differences among pupils. With these tests it is possible to measure with fair success the ability of each pupil and to discover the difficulties under which he labors on those subjects in which he does not do well. When a class program is laid out for group instruction, it is made with the average ability of the class in mind. Individual differences among the pupils may result in the inability of some to keep the pace, while others are merely "loafing" and not learning to use their minds to full advantage.

With large numbers of children in one grade, this condition can be avoided by grouping pupils of similar ability and placing each group in a separate section for instruction. When the number of pupils in a grade is small, so that division of the class merely creates duplication of teaching, with groups too small to maintain class interest, some other method of meeting the problem of their varying abilities should be devised. Otherwise, under our system of advancement of pupils grade by grade and semester by semester, we often find, for example, in a typical fifth grade class some students who have the ability of the average seventh grade pupil while others can do work of only the third grade level. Similar conditions often prevail throughout an entire school system and should be corrected.

The brightest pupils, listening to the repeated explanations that a teacher must give to the dullards, become bored and either quit working or acquire the habit of working far below the level of their capabilities. The dull pupils on the other hand find themselves moving in a haze of words and ideas that are not more than half understood and soon become entirely a mystery. Eventually they fall behind, receive "flunks," and acquire a feeling of inferiority and frustration, which causes them to drop out, defending themselves with "What's the use anyway?" It is only the average child who finds work that is difficult enough to be stimulating and yet easy enough not to be discouraging, and even he becomes annoyed by the conscientious teacher's effort to make a difficult point clear to some poor child who is unequal to the task.

Several plans have been proposed for overcoming this diffisulty. One that has been widely adopted is the so-called Dalton Plan in which the class has a stated time to do a given amount of work and in which each child budgets his time among his various subjects according to his individual needs and difficulties. This works well when a child is weak in one or two subjects and strong in others so that he can spend extra time upon those weak subjects. But when, as too frequently happens, the same child is weak in all subjects then he still trails behind and is once more lost. The problem of the able child is less difficult because he can be given the material he is capable of doing in this plan, by outlining maximum and minimum requirements. Mr. J. M. Ritchie tried this plan at Swiss Cottage, London, England, but I understand he was compelled to abandon it because it proved unworkable under changing conditions in his school.

Another plan that has received notice is the Winnetka plan of individual instruction developed by Carlton Washburne, Superintendent of Schools at Winnetka, Illinois. Under this plan the work is organized in such a manner that each child may proceed at his own rate. When the pupil feels that he has mastered a topic he is given a diagnostic test. If he passes this test he is allowed to go on to the next topic but if not he is drilled by the teacher on the items he hasn't mastered. He is drilled and re-tested

until he has mastered the topic and is then allowed to proceed. This plan keeps the able pupil busy on something new and invigorating, while the dull pupil can have time to master each item.

Several years ago I began teaching algebra in the Illinois School for the Blind and after adjusting myself to the difficulties due to the handicap of my pupils I found myself faced by the problem of compensating for individual differences. Boys and girls would go along wonderfully well for a few weeks in the early part of the course and then would strike a snag somewhere and be "sunk without a trace." The attempt to rescue these unfortunates would disrupt class work and the patience of the brighter members of the class would be exhausted long before that of the teacher—they did not feel the same responsibility. This course, if persisted in, held back the whole class and the interest of the better members disappeared. Special periods devoted to these students were seldom a sufficient remedy because usually the failures needed more help than the teacher had time to give.

Another difficulty that was faced was that of concerted preparation of algebra assignments in the cottages. Each evening the members of the algebra classes would gather in one or two rooms in each cottage and prepare their algebra assignment. Usually this resulted in discussion of the lessons which caused the better members of the class to act as teachers of the poorer students, and everyone had a better understanding of the lesson.

In too many cases, however, it had quite different results. Occasionally if there were ten problems to work and five people to do them each individual did two and then all exchanged answers. The next day the participants in one of these "congresses" would turn in identical sets of answers. Sometimes they even included the same errors in braille forms. Ex-students of algebra have told me that occasionally these answers were written simultaneously on the same slate and the names affixed later. No lectures upon the necessity of learning to do for oneself completely cured the difficulty.

As a result of this situation it was very difficult to inspire any self-reliance among the "leaners." They had the answers and some notion of how they were obtained, although they had received boosts at the difficult places and, so they reasoned, that was enough. There was no need to tire themselves with attempts to get problems without help. As a consequence some students were very good—they had done the work; others who were nearly as capable, were very poor.

While casting about for some remedy for this I recalled the Winnetka plan which I proceeded to try out on a second-year class of fairly even ability. This class had already covered as much algebra as several previous classes and so had little to lose. Although undertaken with little preparation the success was so immediate that the same plan was undertaken with a first-year class which, at the end of the first semester, had become a problem because of widely divergent abilities. Automatically the class promptly divided into two groups—one which turned back to work they could do and another which went on with fractional equations just as if no change had been made. During the school year 1932-33 both first- and second-year classes were organized from the beginning on this plan, on the basis of material which was prepared during the summer.

In planning the course for the year, two sets of material were prepared—the work sheets which presented assignments of the subject matter and the test sheets by which the pupil's mastery of the assignments could be determined.

For the work sheets, which were brailled and put in the hands of pupils, the subject matter was divided into units which, as far as possible, were approximately the same length but maintained unity of material. Each unit was expected to take the average pupil a month or less to complete, with the ideal length probably between two weeks

and a month. Included in each work sheet were simplified explanations of the principles and processes which applied to the list of problems presented for solution. For this purpose, *Ninth Year Mathematics* by Schorling and Clark was drawn upon rather heavily for hints and examples of simple directions. Further references to the explanations in our text, *First Year Algebra* by Wells and Hart, were added, and then came references to problems and exercises in the text. When the text was found to contain too few easy problems, a further addition of special drill exercises, to precede the text material, was appended to the work sheet. For these exercises material from the textbook by Schorling and Clark was again used, together with *Instructional Tests* by Schorling, Ciark and Lindell, also an algebra workbook published by The Macmillan Company—and various algebra review books.

The success of individualization depends to a great extent upon the clearness of these work sheets which must serve as a foundation for the pupils' understanding. They must of course be supplemented in various ways to be described later.

The tests were prepared from lists of the fundamental skills to be acquired, made for each unit, and lists of the tricky difficulties which arise to plague every algebra student if he does not master them early. These tests are an important feature of the course since the teacher must depend upon them for his judgment of the ability of the pupil and the extent of his mastery of a unit. Therefore they must be carefully written. Too complicated problems should be avoided because it is difficult, or impossible, to determine just how a mistake in the solution is made and the teacher can not judge the proper subject for drill without much investigation. For example, if it is desired to test a pupil's ability to handle addition of fractions with binomial denominators, his knowledge of method is tested just as well with a problem containing two fractions as in one containing three or four.

These tests must be diagnostic, with each problem carefully selected to contain only the skill that is to be tested. There are now published many diagnostic tests that will give the teacher an idea of how to frame these questions. In many cases it will be possible to use the same test for several pupils; when there is danger that pupils will pass on problems to others, substitutions can be made in numbers and letters which will change the answer sufficiently to prevent copying.

During the class period pupils are engaged in work on the unit to which they have, at the moment, advanced. Pupils who are working near to one another are allowed to help each other to some extent—they would do so out of class anyway. Meanwhile the teacher is moving about from pupil to pupil, as he is called upon for help or as he thinks he is needed to check upon methods used or problems solved.

The check upon methods is necessary because when left to themselves pupils sometimes develop unsound methods which may work for a while but break down when the problem becomes complicated or slightly changes its nature. An example of this occurred among a few members of a first-year algebra class that seemed to be progressing beautifully in long division. Suddenly they began missing every problem and when the situation was investigated it was discovered that the first fifteen or twenty problems in the text had been trinomials divided by binomials and they were dividing the first term of the trinomial by the first term of the binomial divisor for the first term of the quotient, and the third term of the trinomial by the second term of the binomial for the second term of the quotient. It worked well as long as there were no more than three terms in the dividend and no remainder, but broke down when another term was added.

Pupils also form erroneous ideas of the solution of an equation, ideas which work on certain very special cases and very simple problems, but cannot be adapted to more

difficult ones. For these reasons a close check should be kept upon procedure especially when beginning a new topic.

In order to relieve the teacher of unnecessary work I believe the answers to those problems that do not lend themselves readily to checking should be given to the pupil. Any attempt to shirk will be exposed by the tests. However there was no time to braille more than a few so I arranged for each pupil to place his answers and other work in a tray convenient to the door as he passed. Later in the day these were read and corrected, notes made on the pupil's paper to be discussed with him in class or at a special conference the next day.

Occasionally a note is written on the Hall writer to be given to the pupil for his own study. This note may contain a statement of the kind of mistake, a simple problem making clear the difficulty, or, if advisable, a simple statement that certain problems are incorrect, thus leaving to the pupil the problem of finding his mistake. At some time during the period the teacher takes occasion to stop at such a pupil's desk and to ask him if he has found the trouble and what it was.

When a pupil does not seem to progress satisfactorily and there does not seem to be time to remove the difficulty in class, a special conference is arranged after school. In this conference the teacher tries to discover just where the difficulty lies. In theory there should be no need to drill upon types of problems already tested and passed but practically it is frequently found necessary. Memories are not perfect. This conference is expected to expose such difficulties and others more obscure. Exposure is, of course, followed by remedial drill.

Two types of records are kept. One is a class record kept upon a sheet which has the pupils' names down the side and a list of tests across the top. When a test is passed, the teacher enters the date opposite the name of the pupil and under the name of the test. This gives a record of a child's progress, both relative and absolute. In addition to this each member of the class has a separate sheet in the teacher's notebook on which are recorded such things as temperamental difficulties, results of conferences, attitudes, types of problems causing trouble, mistakes in tests, assigned drill, and other items which complete the picture of his progress and adjustment as a member of this particular class.

In the introduction and development of the plan many adjustments had to be made. One of the most troublesome was the organization of the units and work sheets, due to inexperience with this type of work and the mistaken notion that effort would be saved by making the units as short as possible and depending upon the text to make the work clear. As a result it was necessary to make long oral explanations of methods of solution and of directions for work which were not sufficiently explicit. For this reason some of the units had to be revised before they were even tried and others will have to be revised. It was also discovered that it was economy to include the lists of drill problems in the original work sheet and not in separate sheets as at first intended.

Certain temperamental difficulties were revealed among the pupils and caused considerable concern. Some pupils failed to grasp the idea and felt that because there wasn't a particular stint to do every day, there was no reason to try to prepare a daily lesson, and soon fell behind. Most of these realized presently the necessity for work and began to make reasonable progress. Others "saw the light" when minimum requirements were set for each semester and it was explained to them that unless they reached a certain point they could not be given a semester's credit in algebra. Those who tried to bluff their way were quickly caught up when they declared themselves ready for a test. Naturally, not being sufficiently prepared, they failed and were compelled to drill, until they could pass the test, on that work which they had tried to skip over. After

(*Continued on page* 12)

DOCTOR ALLEN SAYS:

OVERBROOK, PERKINS, AND WINIFRED HOLT MATHER

In 1904, Miss Holt, daughter of Henry Holt, the author and publisher, putting aside her sculpture in order to make the cause of the blind her life, visited the Royal Normal College, London. There she studied its activities and learned of its extraordinary placements; learned, too, something of the inadequacies of similar work in America. Presently she visited Overbrook and, finding in me a practical enthusiast and believer in my cause, she came often. Meanwhile, she and her sister had founded the New York Association for the Blind. Rapidly they initiated new, beneficent activities, including the pioneer lay efforts for the prevention of blindness, the most important of them all. Their Association had influential backing and increasing financial support. It also had unexpected opposition.

I had been pushing American braille and had builded an inspirational environment for my people, both things embodying my conviction that only the best is good enough for them. Of course such idealism then met with certain professional disapproval; but Miss Holt being of kindred spirit, we joined forces in a reform battling with conservatism. She had made me a consultant of her association. She reprinted and distributed my translation, "Advice to Parents of Blind Children." She persuaded the editor of the *Century Magazine* that our cause needed educational publicity, and arranged for an article. Its writer-to-be she brought to an "Overbrook Day." His "New Basis of Work for the Blind" appeared in 1909. Miss Holt, herself, wrote often. She spoke to audiences of all kinds and she interested people in our common field of labor.

When the Association held an awakening exhibition in the Metropolitan Opera House, where President Taft and the late Joseph Choate spoke, Overbrook helped by setting up a school demonstration. Later, my successor there sent over a team of blind boys who performed gymnastic feats at her Hippodrome demonstration. One of his best teachers became supervisor of blind classes in the New York public schools, a movement helped by Miss Holt. My printer in Boston brought out for the New York Lighthouse the pioneer braille periodical for young children, which he founded and edited. The Association employed Overbrook and Perkins graduates. One is now its Director of Social Welfare. During the Great War when, at the request of the French Government, she founded Lighthouse No. 3 in Paris, she ordered for the allied war blind hundreds of tangible checker boards and interlocking domino sets supplied by Perkins.

Miss Holt, as Mrs. Mather, with her husband made many missionary tours abroad, taking along a moving picture of Perkins activities; and they have not only brought students to my Harvard Course in which both have lectured, but also shown to large, influential groups on four continents American ideals for the prevention of blindness and the education of blind youth, and have even established pioneer lay efforts and committees for prevention and for helping the blind in Egypt, India, Singapore, etc. Elsewhere I have described these journeys.

Mrs. Mather has given heroically of herself and unstintedly of her strength and resources towards preventing blindness and "helping the blind to find new horizons of happiness and usefulness"; and she has been doing all this all these years because she cared. Naturally, Overbrook and Perkins have deemed it a privilege to work with her in behalf of our common cause. Blind people and their friends everywhere owe her a debt they can never repay; and sometime history will acknowledge it.

DEFINITE OBJECTIVES AS A BASIS FOR MOTIVATION IN GEOGRAPHY FOR THE BLIND

Etta Michaels

The value of any subject in the curriculum can be measured only in terms of what the study of that subject does in changing the individual—what changes it makes in his attitude toward life, in his understanding of human beings and their problems, in his own greater ability to adjust himself to life. No subject taught in the elementary school offers a greater field for this needed training than do geography and other social sciences. To give this wide training, geography must become a part of the life of the child, must have realism for him, must develop activities which make the subject the very core of his life because he lives in it, is working out its problems, and because the activities associated with the work are interweaving his study with his living.

As we study the blind children and try to analyze the possibilities of the work in geography as training which would develop in each child better powers of adaptability and self-adjustment, there seem to be certain objectives offering definite values. These objectives are: First, training the child to listen intelligently, as much of the education of the blind child in school and after school days are over must come to him through the ear; second, training in his ability for self-expression, not only by the gaining of a vocabulary by which to express himself, but also by training in such use of the tactile sense that he may make clear to himself and others the ideas he has in mind; and third, training to arouse in him the desire for knowledge, knowledge which must come not only through books but through contacts with the world, through knowing people who have something to give him in worthwhile information, and through many other sources for the gaining of first-hand informational material. It would seem that these are definite objectives working for the self-development of the blind child along lines which will make his adjustment to life more possible. Back of the working of these specific objectives we have two major objectives—first and greatest is that of the real growth of the child; and second, of far less importance, is that of establishing a fund of basic information.

How we can motivate the work in geography so as to reach these objectives is the important question for us to consider. No formal device for motivation will accomplish this. Our work must be rich in situations all pulling together to grow into some realization of these objectives. We must seek situations which will make changes in the attitudes and conduct of the child, for growth comes only through such changes. Therefore, first of all, we must establish for our work, a rich setting of things which will enlarge the experience of the child by giving him contacts with that which adds to his ideas, by giving him newer and perhaps truer ideas than have been previously acquired, and by clarifying these ideas. Aside from the experiences which come from the contact with materials, there must be experiences which give him contact with other sources for the formulation of ideas. He must meet the people who have something to give from travel or from personal experience in industry, or perhaps in government. To widen the knowledge of a group as to their own state, in a specific instance, children interviewed members of the faculty to learn of their home locality, wrote to various centers, listened to the blind field agent of the school give his impressions of the state as gained through his travels.

The geography room itself can contribute much to this enriching of experience. The room should be equipped with contour maps accessible at all times, globes with sanded outlines making land areas distinguishable to

the fingers of the blind, exhibits of various kinds, including such commercial ones as cork, lumber, zinc, aluminum, rubber, and the like. In this exhibit should be included simple geological collections such as samples of sandstone, limestone, shale, granite, and marble, which by their weight or texture give some impressions of the differences in rock formation. In this room there should be bulletin boards which draw children to them whether they be blind or with sufficient vision to read ink print. Material about the room should tempt wise use of leisure time, for one of the greatest outcomes of the study of geography is the creation of interests which carry over into enriched use of leisure time.

An illuminating illustration of the value of this enriched setting comes to mind. One of our groups was studying the geography of our own state. A very fine contour map always hung in its particular place in the geography room and was to me one of the most interesting things in there. At the time of this study I hung beside it two of the pictorial maps of the state, one a sectional map of great detail, and the other one covering the whole state as to historical background. These maps could mean nothing to the blind except as information about them was gathered from the partially seeing children, but the interest was just as intense on the part of the blind as with those of some vision. Blind children gathered about these maps with children of partial vision, finding out what was the historical setting of their home town, or where some character familiar in history had functioned in the history of the state. There was much going from the pictorial maps to the contour maps to show a blind child just where certain events took place, such as following Marquette in his travels up the Fox River. A geography room functioning as does the science room of the Horace Mann School of Columbia University would be ideal; it would mean a room rich in interesting geographic materials, open most of the time, with a responsible seeing individual always in attendance ready to work with the children at any time or to answer any questions. Such a situation would in itself motivate a very great deal of the geography and in a residential school might be easily possible.

We have spoken of training to listen intelligently as one of the objectives in the education of the blind. In our first contacts with blind children we felt that while they were good listeners, they were often merely passing time, and did not hold themselves responsible for getting much from what was presented. Questioning the children on the material covered, or the idea of utilization of the material, did not show the results reasonable to expect. We began to direct attention to the value of the sense of hearing to the blind. Talking with the children about this seemed to make considerable impression because so much of the world comes to the blind through their ears. The children became keenly interested in the problem, and we were able to direct attention to it without creating a strained situation.

We worked out several tests to demonstrate the students' ability to get much from a listening situation. Sometimes we gave check tests on material read in class or on topics we had all listened to over the radio. One such exercise was that of reading a bit of well-organized material and having a check on the major points covered by the author. Another exercise devised was the single reading of material well suited to the ability of the group, followed by a true-false test, so that children might compare themselves with others in the group in regard to ability to gain from an audience situation. To listen intelligently one must not only get the facts presented but also be able to organize the material as it is given. In the training of organization habits, checking on outstanding points made by the author or lecturer gives experience in selection and retention.

The radio is particularly valuable in the training to develop all phases of this ability

to listen intelligently. It gives to the blind the contact with the news of the day which comes to the reader of print by glancing over the headlines. More than this, it presents discussions both pro and con on the matters of greatest interest in problems of the day and constantly gives current facts in direct contact with the matter being studied. The reading on such questions is often quite inaccessible to the blind children. Children should use the radio in their school work in such a way that it becomes a source of value to them in all later life. Hardly an hour of the day passes which does not have a program of value on some line of their geography. Specially planned educational programs such as the School of the Air entertainments are particularly valuable in their presentation of geographical material.

The Talking Book will be of great value along much the same lines but will offer the advantage of extensive material and thus open the way for training in a different sort of listening. Travel talks not only from outsiders but also from students or faculty of the school are important because of the information they give, but more so for the feeling of the personal touch and the nearness which comes in this more intimate presentation. It does much to establish the human relationship which we so need in the greater closeness of all people of this age. A half hour of this vivid description often does more of permanent value than weeks of more intense study. In all this the point we wish to make is that the listening to such materials should be of more than passing interest—active instead of passive.

We have set as another of the objectives important in the education of the blind that of self-expression. Perhaps we most naturally think of expressing ourselves in the medium of speech. There is a wide field here and in lines of great practical value to the blind. There are many opportunities for reports of trips made, of exhibits seen, explanations of some special piece of outside work, such as a talk by some fourth grade boys to make clear a map of the Panama Canal which they had constructed. All these give opportunity for oral expression.

Debates offer a valuable means of free expression. We had debates on the Russian five-year plan, on the textile industry of the Northeastern states as compared with industry of the Southern states, and various other suggestive topics.

Dramatic art offers a rich field for self-expression and pageantry is particularly valuable in giving opportunity for self-expression in geography. Some suggestive bits of pageantry which arise naturally from the geography work and which might well be worked out could be the presentation of Christmas celebrations of various countries, each group of children featuring the customs of a particular country. Another possibility might be the nations' best gifts to the world, in which each group presented its concept of a great national contribution to the world's history. In America, for instance, Edison and his development of electricity might be featured. How the world is fed offers another opportunity for pageantry, with one of the great food products of the world, as, for example, corn, chosen as the center of interest. There is much here of special value to blind children for the costuming could be simple, the work of one unit carried out by one group, with a reader giving the prologue. The processional of the pageant could be as easily carried out by blind as by seeing children. Dramatic plays instead of pageants might be developed on the same themes.

Dramatic play is particularly valuable in its development of the blind child and geoggraphy offers a rich field for its possible use. Children are quick to catch the idea and enter into the dramatic work with vim. At one time a group asked if they might not have a Chinese school some morning. The suggestion was accepted and one class period was carried out from the standpoint of such a school. Having lived one year with a teacher recently returned from seven

years of work in China, the teacher of this group had much to contribute to the work of a play teacher in such a school. The hour was one of much fun and also one of much seriousness and was thoroughly worthwhile. To the teacher working with the group, it suggested the idea that more of this free dramatization might give a more personal interest in people of different countries. Both pageantry and dramatic play offer opportunity for much intensive self-development because of the working and planning in groups, the judging as to possible outcomes, much growing in powers of self-control, and quick adjustments to new situations—a training which all children need.

A very different means of self-expression is gained through the use of plastic art. Modeling to make clear the idea in mind is of great value both to the teacher and child. Plasticine is a good modeling medium for the geography class. The teacher may make models and let the children see with their fingers what she has attempted to give to them orally. Modeling by the children to make clear to idea in mind is especially helpful, giving as it does very clear evidence of the interpretation made by the children of material presented. Groups of children attempted to express their idea of an irrigation project. The incident not only revealed to the teacher various talents and interpretations but many unguessed problems arose which could easily be clarified but which would not have been realized as problems at all had not this attempt at portrayal been made. Most blind children having had little training in this type of expression are rather afraid to attempt to tell things through modeling. This form of expression should be encouraged since it develops dexterity of fingers and clarity of thinking. Few seeing people are artists, yet even a rough drawing clears the thought; the blind cannot draw but can successfully use modeling materials.

Formal work in geography, following the text closely, does not as a rule create much of a desire to find out about things or to go far beyond the text. It does not do much toward forming life habits. Geography becomes just another subject to be studied and thrown aside when the work is over. The subject should whet the appetite so as to carry all of the group far beyond the text. The more the work ties up with life situations, the better it will function in later life. The use of the radio does as much in so stimulating interest as any of the activities already mentioned. Trips, excursions of various kinds, visits to industrial plants, all help not only to create but also to satisfy the desire for knowledge.

The blind child should be encouraged to gain first-hand information. This is a strong natural desire in all children. With the blind, it needs opportunity for reasonable satisfaction so as to become a controlled habit rather than one of mere obnoxious over-curiosity. The seeing child has to learn to control his eyes, for a shifting, roving eye does not signify stability. The blind child has to learn to control his fingers for the same reason. He needs therefore to have plenty of directed opportunity to satisfy himself.

The experience of taking blind children on an expedition is most thrilling, and one can but marvel at all that such a trip opens to them. All senses are on the alert to make up for what the eye is missing. To go through a process, seeing nothing, would seem to give nothing, but such is far from being true. The atmosphere, the smell of the factory, the sound of the machinery, the going on from step to step for each detail of the manufacture, some opportunities of tasting or feeling, as well as the hearing of the words of the guide—these and many other concepts come to the blind child on the excursion. The travel, the sense of distance, the feeling of the outdoor world all go for one great work in education—experience.

All of the out-of-doors of the home locality should contribute to the experiential

geography of blind students. It is possible to climb a rough hillside and gain quite a feeling for mountain climbing, particularly if the children's guide is one who has climbed mountains and knows how to follow a trail.

We were fortunate in having a river flowing through the school farm with widespread banks rising into the hillsides, and we shared many delightful experiences exploring the banks. The rains washed out great gullies; in places little creeks flowed into the river. From the coarse surface soil, left exposed in these washed-out areas, we learned much of soil erosion, and the fine silt carried at the bottom of tiny streams completed the lesson. The trees massed along the bank told a story of humus and of moisture conservation. The grain fields of the farm gave sense impression of the height, the taste, and the structure of the different grain plants. The red clover field with only the sound of the big bumble bees, and the white clover field with the lighter buzzing of the honey bees, had their particular stories to contribute.

All such hours in the out-of-doors give the children a rich and thrilling sense of geography as it actually exists in the world about them. If the seeing teacher of geography can add a blind compatriot to her group on such excursions, she will find her insight into the education of the blind taking strides.

There are other activities which closely satisfy the desire for knowledge and tend to form life habits. A library hour was introduced into our geography classes, after the preliminary work on the text had been finished and the foundation material of the topic was well in mind. We brought into the classroom all material possible to procure relative to the topic. Children made their own selections and soon the whole class seemed submerged in the material, so eager was their interest. Their own enthusiasm led them to share important subject matter with others. The teachers went about among the group answering questions, sometimes asking questions. We varied procedure to meet the needs of the day. Often the class was divided into groups to share material together. This was the case when preparing for debates or discussions. We felt that these library days were among the most fruitful recitations.

In our geography text in the ink-print edition there were many graphs used to make given statistics clear. In the braille edition only tables were given and quite frequently even these were omitted. There seemed a certain resentment on the part of the blind children that they were shut out from these graphical illustrations, and because of this we devised a series of graphs, pictorial and otherwise, which could be read by the fingers of the blind. On each one of these graph sheets we placed a little embossed American flag above the illustration of the United States, thus making it easy for the children to make comparative studies of the countries.

With glee the children found the United States to be the first in wheat production, first in manufacturing, and first in the production of cotton. They were alarmed to find Russia nearly equal to the United States in the production of wheat. A dozen or more of these graph sheets were thumbtacked to the doors of the room and were referred to by the children again and again in all classes. As a whole they motivated a big field of formal geography and the details of working out the statistics upon which the graphs were founded did much to clarify the real meaning of graphs.

The final general objective we should have in mind is the gaining of a background of facts as a basis for interpretation of later reading and study. We are working for this in all that we do, but we, as teachers, need to check on this as to essentials, for it is very easy to go on indefinitely with interesting material and work and find to our dismay that not much of it has, as we might say, "sunk in." Some studies are being made as to what are the essentials in geography. This is being done by an analysis of geographic terms used in current literature. Such a study will probably become the basis for types of check tests on such essentials.

Out of the general impressions children should have some established facts. The greatest good lies in what the broader work has done for the child, but there must be some selection of essentials and some checking as to understanding of material.

Motivation in geography must be measured as to its value by determining what it does for the child coming under its influence. The teacher of the blind must select those objectives which best train the blind for real living. The best training comes through such class activities as involve these objectives and which give the opportunity for each child to participate fully. An activity which we carried out on the geography of the United States wherein the group formed themselves into a juvenile House of Representatives gave opportunity for every one of these objectives to function normally.

It is quite possible to organize such activities in geography as to meet all the needs which we have been stressing and furnish opportunity for such participation on the part of each pupil as will lead to the greatest growth. I have watched club work in geography classes where the questions under discussion represented current geographical material and the growth which came to each child participating in this activity was most satisfactory. Activities which make the child live through life situations and which train him in powers of self-adjustment, are of far greater value than any formal work which we might carry out, and the greatest motivation comes through adaptation of formal study to such activities.

(*Continued from page 5*)

other things failed, some of the out-and-out shirkers were persuaded, through a succession of extra study periods, that it would be well at least to make a feint at working outside of class.

Those whose mentality was such that algebra was very difficult or impossible demanded much more than their share of the class time. It was much easier to give this time because the teacher could feel that he was not depriving the brighter pupils of the opportunity of advancement nor was he boring them with tiresome repetitions of simple explanations to which they must listen. Of course these unfortunates could make little progress but they made some, if they had any ability at all. They would undoubtedly have failed under any plan and we felt that they probably had more knowledge of algebra at the end of the year than they would have had under the old system.

Certain very definite advantages were apparent as the year progressed. There was an increased self-reliance on the part of most pupils. The brighter pupils had a sustained interest and made greater progress than they would have otherwise. One boy whose interest was stimulated by the possibility of attainment finished a year's work in about a half year of school time. Each individual was personally responsible for his own work. There was little collusion or copying in the cottages. Pupils helped one another but they realized that nothing was gained unless the problems were mastered. Mastery of the method of solution, and not the answer, was the goal. Preparation for recitation and tests was more thorough and when tests which had been given to previous classes were given to members of this class the average results were better. Dull pupils were not pushed beyond their capabilities and so were able to work problems they would probably not have been able to do otherwise. They felt a certain pride in their achievements. At least they could do something.

As experience widens and can be supplied to succeeding algebra classes and as a tradition is established for independence and self-direction in the conduct of this course, it is hoped that not only will better mastery of this subject be attained by each pupil enrolled, but that the plan for individual responsibility may make a contribution to improved student attitude in the school.

SPEED AND PRESSURE FACTORS IN BRAILLE READING

B. F. Holland

Problem

The object of this report is to indicate the relation of pressure to speed in reading braille. By pressure is meant the amount of weight the reader exerts on the braille characters by his fingers as he moves them along the line of type. By speed is meant the amount of time required to read a given unit of text material. Attention will be called to the following problems: (1) Do fast readers use a greater or less amount of pressure than do slow readers? (2) To what extent are speed and pressure correlated in normal reading? (3) How does the amount of pressure vary within the line and with different lines?

Technique

The technique employed in the study of the foregoing problems included a device for measuring pressure, a timing mechanism, and a kymograph. The pressure device was constructed about a pair of lever balances. A reading platform was mounted on one end of the balance and a tambour on the other. This tambour was connected with another which operated a stylus in contact with smoked paper on the kymograph. The entire device, except the recording tambour, was inclosed in a reading desk, the reading platform coming flush with the top of the desk. A Jaquet chronometer was used to get a time line indicating fifths of a second on the kymograph at the same time the pressure record was being taken.

Procedure

Each subject was seated at the reading desk and asked to read (1) a practice selection and (2) an experimental selection taken from the Stanford Achievement Reading Test. In each case, he was asked first to find the starting point at the beginning of the first line and to wait for the signal to begin. The practice selection was presented first as a means of getting the subject adjusted to the total reading situation. While the subject waited for the signal to begin the experimental selection, the operator adjusted the timing and pressure recorders against the smoked paper. The subject was then told to read as he usually reads, and the record was made. As soon as the recording was completed, the operator placed weights on the reading platform and inscribed lines on the smoked paper to represent pressures of 50, 100, 150, 200, 250, and 300 grams. These lines were used later to determine the amount of pressure exerted on the material while the reading was in progress.

The subjects used consisted of 17 slow and fast readers in Grades 4 to 10. The pupils were selected on the basis of speed records made by photographing the movements of the fingers in a previous experiment. The object in selecting pupils from a wide range of grades was to get a composite group of readers. The section of material used contained seven lines.

Results

The raw data consisted of smoked paper records of the performance of each subject; i. e., the time record made by the chronometer and the pressure record and pressure lines made by the pressure device. Speed of reading was determined, therefore, by counting the pulsations in the time line; and pressure was determined by noting the relation of the subject's pressure line to the lines inscribed by the use of the different weights. To assist in locating the position of the pressure line, the distance between two lines representing given weights was broken up into unit distances corresponding to 10 grams each, and the pressure line was located with respect to these smaller units. The data collected for each subject consist, therefore, of (1) time of reading each line in fifths of a second, and (2) amount of pressure for each line at the beginning, middle, and end, as measured in grams.

The results make possible (1) a determination of the relation of pressure to speed, and (2) a study of variations in pressure within a given line or within the paragraph as a whole. The data showing the relation between speed and pressure will be presented first.

Table I shows the average time per line for the lines read and the average pressure per line as measured at the middle of the line for eight fast readers and eight slow readers. Fast and slow readers were selected by taking the eight subjects above and the eight subjects below the median speed record.

The degree of correspondence between speed and pressure is +.27, when the measures shown in Table I are correlated by the rank-difference method. When the average pressure per line, determined by taking the average pressure at the beginning, middle, and end of the line, is correlated with average speed per line, the coefficient is +.31. Though hardly high enough to be significant, these coefficients are positive, and they indicate the same trend as the data in Table I.

On account of the small number of cases upon which the foregoing data are based, the correspondence shown between speed and pressure may not be a reliable one. The data suggest, however, that some good readers exert more pressure upon the material than is necessary for efficient reading. It may be that other good readers exert a greater than average amount of pressure to make up for a lack of tactual sensitivity. Probably the amount of pressure exerted by many readers could be reduced considerably, without impairing their reading efficiency, by cautioning them against using an excessive amount. If this hypothesis could be demonstrated experimentally, it would be of practical value in suggesting to pupils the development of a habit of touching braille lightly, a desirable habit to form in blind pupils in view of the destruction of printed matter by readers who exert an excessive

TABLE I
AVERAGE TIME AND PRESSURE PER LINE FOR FAST AND SLOW READERS

Subjects	Fast Readers		Subjects	Slow Readers	
	Avg. Time	Avg. Pressure		Avg. Time	Avg. Pressure
DK	8.4	155.0	LC	13.6	135.0
LM	9.7	98.3	AS	15.0	70.8
LG	10.0	96.3	GB	19.0	188.0
AR	10.6	97.5	JN	19.3	76.6
MB	10.8	71.4	GM	22.2	107.5
LH	11.8	129.3	CF	22.4	123.0
NS	12.0	90.0	WH	23.7	278.3
JM	12.2	46.6	BP	24.2	127.0
Average	10.7	98.0		19.9	150.8

This method of selecting fast and slow readers divides the subjects into groups which read at markedly different rates. It may be seen from the averages of each column that the fast readers read at an average of 10.7 fifths of a second per line with an average pressure of 98.0 grams, and that the slow readers read at an average of 19.9 fifths of a second per line with an average pressure of 150.8 grams. These facts indicate that in general fast readers use less pressure than do slow readers. Inspection of individual cases will reveal, however, that the tendency is reversed in a number of cases. A few good readers, for example, used a greater than average amount of pressure, and some poor readers used less than an average amount of pressure.

amount of pressure. Nevertheless, before this hypothesis should be pressed into service by teachers, the relation of tactual sensitivity to pressure should be established. If sensitivity is highly correlated with pressure, it is doubtful whether efforts to reduce the amount of pressure would produce any appreciable results, that is, in the case of children who press down hard upon the material because of poor sensitivity.

Attention will now be directed to the question of variation in pressure within a given line and within a paragraph. The characteristic pressure record is not a smooth line. It contains numerous short-time fluctuations with a fairly constant amount of vertical displacement, and momentary fluctuations occasioned by the release of pressure at the end of the line while making the return sweep. The first type of fluctuation in the record appears to be due to differences in pressure occasioned by spaces between the braille characters, especially between words. Most records as a whole, however, show a minimum amount of pressure at the beginning of a line and a gradual rise to a maximum amount at the end of the line. This characteristic is frequently exhibited by the data in Table II showing the records of ten subjects, from which pressure was determined at the beginning, middle, and end of the line.

It may be noted that in all cases, except those of JM, ET, and LG, the amount of pressure is less at the beginning than at the middle of the line, and less at the middle than at the end of the line. Even in the records of the excepted cases, the pressure is shown to be greater at the end than at the beginning. The general character of this latter phenomenon is emphasized further by the fact that it fails to exist in only two records out of the seventeen obtained.

TABLE II
AVERAGE PRESSURE AT THE BEGINNING, MIDDLE, AND END OF LINES

Subjects	Average Pressure		
	Beginning	Middle	End
JM	64.1	46.6	86.8
JN	55.7	76.6	95.8
LM	67.5	98.3	135.5
CF	62.0	123.0	191.0
ET	73.7	65.0	107.5
WH	252.6	278.3	381.6
GM	51.6	107.5	135.8
NS	43.3	90.0	85.0
LG	105.0	96.0	140.0
NB	155.0	161.2	173.8

The amount of change in pressure within a given line varies with slow and fast reading. The variation is less in the performance of fast readers than in the performance of slow readers. This fact is demonstrated in Table III showing the average difference between amount of pressure recorded at the beginning and end of the lines for fast and slow readers.

Here it may be seen that the group of slow readers, reading at approximately half the speed of the fast readers, show an average difference of 64.8 grams in pressure at the beginning and end of the line. The average difference in pressure is, therefore, approximately twice as great for the slow as for the fast readers. This fact, when applied to the average pressures for slow and fast readers given in Table I, implies that slow readers start each line with a relatively small amount of pressure and end with a relatively large amount. There are, of course, some individual variations from this general rule.

Variations in the amount of pressure recorded for different lines in the paragraph may be studied by inspection of Table IV which shows the average speed and the measure of pressure for the second and fifth lines for different subjects.

An inspection of these data will reveal that the difference between the amount of pressure on lines two and five varies from —60 to +100. It may also be observed that all of the negative differences except one are in cases of subjects whose speed of reading is greater than the median. If the eight differences for subjects above the median speed are averaged, the difference for these fast readers is —8.1. This fact implies that fast

TABLE III
AVERAGE TIME AND AVERAGE DIFFERENCE BETWEEN PRESSURE AT THE BEGINNING AND END OF THE LINE FOR FAST AND SLOW READERS

	Average Time	Average difference in pressure
Eight fast readers	10.7	32.6
Eight slow readers	19.9	64.8

readers tend to decrease slightly the amount of pressure as they proceed with a given paragraph. The average difference for slow readers, those whose speed is below the median, is +29.3, a fact which implies that these subjects tend to increase considerably the amount of pressure with each successive line in a paragraph. The pressure of five of the slow readers exhibits this tendency in a marked degree. Thus there is something about the performance of many slow readers that causes them to increase the amount of pressure as they read.

An explanation of the differences in pressure within a given line and within a paragraph will now be proposed. The short-time fluctuations in a pressure record seem to be due to a number of factors. It has already been suggested that some of them are due to spaces between letters and words. Other fluctuations are the results of regressive movements. Offhand observation reveals that the amount of pressure increases when a subject makes a regressive movement, a type of movement which is known to occur when the reader experiences some difficulty in interpretation. The amount of pressure changes within the line also as a result of bodily postures required of the reader as he moves his fingers from a left to right position, perhaps exaggerated by a terminal push as he sets the hand for a quick jump to the next line. These last factors may be taken to account for the fact that there is a change in pressure for both fast and slow readers, and the first named factors may be used to account for the short time fluctuations in the records of slow readers.

The pressure record of a good reader is

TABLE IV
AVERAGE SPEED AND AMOUNT OF PRESSURE FOR LINES TWO AND FIVE

Subjects	Average time per line	Pressure for line 2	Pressure for line 5	Difference
DM	8.4	125	150	+25
LM	9.7	70	100	+30
LG	10.0	100	100	0
AR	10.6	100	90	—10
MB	10.8	90	60	—30
LH	11.8	125	110	—15
NS	12.0	140	80	—60
JM	12.2	45	40	—5
NB	13.2	150	150	0
LC	13.6	125	160	+35
AS	15.0	55	75	+20
GB	19.0	170	200	+30
JN	19.3	70	80	+10
GM	22.2	105	110	+5
CF	22.4	100	140	+40
WH	23.7	175	275	+100
BP	24.2	125	120	—5
Average difference for eight fast readers				—8.1
Average difference for eight slow readers				+29.3

generally characterized by greater uniformity than is the record of a poor reader. The main factor influencing the pressure exerted by slow readers seems to be difficulty in interpretation. In attacking a line, the slow reader seems to indulge in a certain amount of exploration before he discovers how much pressure is needed for the interpretation of tactual impressions. As he moves his hand along at a relatively slow rate of speed, he unconsciously increases the amount of pressure as a response to mental difficulty of reading. The fast reader, on the other hand, is better adapted to the entire reading situation, and as a result he begins the line with an amount of pressure approximately equal to that with which he finishes. That is, difficulties in interpretation do not vary in such a way as to require the good reader to modify his method of reacting to the mechanical aspects of the total situation.

The change in pressure from one line to another shown by slow readers is probably due to the increase in the mental load of the reader. As the reader is required to interpret a constantly increasing amount of sensory data, the nervous energy occasioned by his difficulty may be diffused into the muscles of his arms and fingers, causing him to press harder upon the material. The lack of change in pressure in the records of good readers suggests the absence of excessive difficulty. The good reader interprets the materials as he goes without suffering a mental strain which might cause this diffusion of nervous energy.

Summary

From the data at hand, it appears that:

1. Fast readers, except in individual cases, tend to use less pressure while reading braille than do slow readers.
2. The degree of correspondence between pressure and speed, as shown by the rank-difference method of correlation applied to 17 cases, is .27.
3. The amount of pressure varies within a given line. It is less at the beginning than at the end, and there are various fluctuations within the line. There are fewer variations, however, in the case of fast than in the case of slow readers.
4. Poor readers exhibit a tendency to increase the amount of pressure as they read from the beginning toward the end of a given paragraph.

On account of the small number of subjects used in this study, each of the foregoing conclusions is offered as an hypothesis rather than an absolute truth.

THE FOUNDATION LIBRARY

The English Committee of Inquiry into Problems Relating to Partially Sighted Children has just issued their report to the Board of Education. Besides a survey of the educational provisions for partially sighted children in England and some other countries, this report touches upon the medical care and supervision of children of this class, enumerates the types of educational provision available, discusses educational problems and employment, and finally gives a summary of principal conclusions and recommendations.

"Tad Studies Latin" by Florence W. Barbour in *The Volta Review* for May, 1934, tells about a course in Latin undertaken by the deaf-blind boy Tad Chapman, now at high school age. Tad elected this course because of his interest in all languages, and his wish to improve his understanding and use of English. The article is a summary of the progress made in the first 4 months of the course, which seems to be surprisingly successful.

Emile Jaques-Dalcroze has written an article called "Blind Children and Eurhythmics" for the *Catholic World,* April, 1934. When visiting schools for the blind M. Dalcroze was struck by the weak constitution, the physical awkwardness, the nervousness and apparent inattention of most of the children, and so his interest in doing something for this class of children was aroused. He is very enthusiastic about results some of his pupils have obtained when introducing eurhythmics in classes for the blind.

HELGA LENDE.

SPEECH DISORDERS—A REVIEW

By Sina Fladeland

Speech Disorders, *by Sara M. Stinchfield, Ph. D. Harcourt, Brace and Company, New York and London.* 341 *pp.,* $4.00.

"The writer offers this volume hoping that it may be of service to the speech pathologist, laliatrist, speech clinical worker, teacher of speech correction, case worker, physician, or psychiatrist, to whom such cases are referred."

This book may well serve as a handbook to these professions. *Speech Disorders* appeals to me particularly as a textbook for students training in speech pathology. The book is well organized in that the material is easily outlined for purposes of study as well as for practical application. Every phase of disordered speech is touched upon and handled in sufficient detail to be intelligible to students whose knowledge is to be supplemented with additional reading from other sources and with clinical experience. The seven main types of speech disorders with their various subdivisions, their causes, organic and functional, and generally accepted therapeutic measures are adequately treated. The chapters on the dysarthrias, dyslogias, dysphemias, and dysphasias are particularly noteworthy because the organic and functional involvements are numerous and complicated and therefore difficult to present both clearly and briefly.

Perhaps the finest thing about this book is its absolutely unbiased and impersonal presentation of the subject. The author has no axe to grind, and no pet therapeutic method to sell. Her attitude has always been that of open-minded receptivity to the good and practical in the various theories relative to speech disorders, their causes and cures, and the book seems quite expressive of this spirit. The author's opinions do not intrude themselves upon the mind of the reader because they are based upon the results of sound scientific research and practical clinical and laboratory experience of medical, psychological, and psychiatric authorities as well as that of speech pathologists. Her own research and clinical experience are noteworthy, both in this country and abroad. It is this freedom from personal opinion, in particular, that fits *Speech Disorders* so admirably to textbook purposes.

Part II, which is a rather elaborate statistical study, should be of very real interest to research students. To the teacher and clinical worker, however, the real worth of the book is found in the first seven chapters.

Chapter 4 is of particular interest to readers of *The Teachers Forum* because no small part of it is devoted to speech problems among blind children. It would be well for all teachers in our special schools to read this chapter, as it would doubtless impress upon them the prevalence of inadequate speech among their pupils and its existence as an additional and remediable disability. As ammunition to fire at school superintendents, directors, and principals, it is excellent. It is impossible to doubt the author's genuine and sympathetic interest in the educational and social problems of blind children. However, a few qualifying sentences would not only improve this chapter, but also make the author's discussion of real service in the understanding of this group of children. The high percentage of speech defects among pupils of these special schools we do not question, but there should be a fuller explanation of the figures given. Blindness, per se, is not a vital causal factor in speech disorder, and this fact should have been definitely emphasized. Other factors are much more important. A very large number of the pupils in the schools where the speech surveys were made come from homes which are under-privileged in almost every respect, and a very large proportion of them are of foreign birth, which introduces the problem of foreign accents. It is almost ridiculous to compare the reading rates of these chil-

dren with those of public school children. A public school gives a fair cross-section of American life, whereas a residential school for the blind does not. Children from the upper and middle classes are in the minority in these schools.

Her discussion of speech problems among the blind does not enhance the value of her book. She has said just enough to create erroneous impressions in the minds of readers, students, and otherwise well-trained clinicians.

BRAILLE MUSIC

The attention of readers of *The Teachers Forum* is called to an activity carried on by Mr. G. R. Sherman, 1105 East 144th Street, Cleveland, Ohio, a volunteer braille transcriber for the American Red Cross. For a number of years Mr. Sherman has been transcribing music in braille, particularly for use of the braille classes in public schools of Cleveland. The printed manuscripts are turned over to the American Red Cross to be converted into plates from which multiple copies are made.

Following is a list of pieces which have been duplicated by the District of Columbia Chapter of the American Red Cross:

"In a Hanging Garden" by Evans Davies (for pianoforte)—4 pages; *Sur la Glace a Sweet Briar* ("On the Ice at Sweet Briar"), (arpeggio waltz for piano), by Caroline Crawford—3 pages; "Thirty-two Piano Studies for Young Fingers" (American Academic Series, No. 49), by Beryl Rubinstein—23 pages; "Twenty-four Miniatures in Prelude Form—in all Keys—For Developing Pianistic Precision" by John Thompson—28 pages; "A Day in the Country—Five Impromptus for Piano" by Beryl Rubinstein—22 pages—Contents: Tally-ho, Wild Flowers, Butter flies, The Brook, Homeward Bound; "A Farmer"—Anonymous—7 pages; "On the Beautiful Blue Danube" (*An Der Schönen Blauen Donau*) Op. 314, by Johann Strauss—16 pages—for more advanced pupils.

The following piece, transcribed by Mr. Sherman, has been printed by the Madison, New Jersey American Red Cross Chapter, on aluminum plates: "Tuneful Tasks" (twenty little tunes in etude form for first-year piano students), by John Thompson—23 pages.

At present Mr. Sherman is working on a simplified arrangement by Chester Wallis, of "The Beautiful Blue Danube"—7 braille pages—1932 Copyright, together with John Thompson's "Introduction to the Classics" (Twenty Famous Melodies with Life Sketches of the Composers—specially adapted in simple form for use in piano classes or for private instruction—1933 Copyright).

It is Mr. Sherman's aim to do pieces that will not be available otherwise, and to give the sightless teacher copies of the "music of the moment" in order that he may keep up to date with his seeing competitors. The latest copyrights are stressed.

Anyone desiring copies of the above should write to the American National Red Cross, Washington, D. C. The price averages one cent per braille page.

The College of Teachers of the Blind, 224 Great Portland Street, London W. 1, England, has just issued a booklet called "Physical Education of the Blind"—a report of the lectures and demonstrations given at the School for the Blind, Swiss Cottage, during the Summer Course, July, 1933. This booklet should prove of great value to all teachers of the blind as it contains much valuable material on the healthy development of the blind child. There are also included papers on school hygiene, as well as on the general intellectual growth in young blind children. Practical advice is given as to how to conduct practice classes and demonstrations.

THE TEACHERS FORUM
for
Instructors of Blind Children

Address all communications to
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New York, New York

The Editor will not be responsible for opinions expressed in signed articles.

Copyright, September, 1934

A. A. I. B.—1934

A large attendance and an excellent program marked the Biennial Convention of the American Association of Instructors of the Blind which was held at the Missouri School for the Blind, St. Louis, last June.

The Executive Committee had formulated a program designed to include topics of value to all persons directly or indirectly engaged in the education of the blind. Because of the many sectional meetings each individual was compelled to miss the discussion of some subjects which he otherwise might have attended.

Aside from the regular program, the demonstration of the telephone switchboard for use by blind people was an interesting feature. Designed by Mr. Hubert Watson, of Lincoln, Illinois, and approved by the Illinois Bell Telephone Company, the introduction of this board should materially increase the vocational opportunities for blind people —particularly when it has been generally accepted throughout the United States. An industrial exhibit, demonstrations of the Talking Book, Readophone, and the new American Foundation for the Blind braille typewriter were also included in the extra-program activities.

Congratulations are due to Superintendent and Mrs. Green and the staff of the Missouri School for the Blind for the efficient manner in which arrangements for the convention were handled. Those in attendance were aware of a feeling of genuine welcome in the school. The officers and the program committee are also to be commended for the fine program presented, the building of which was a task of no small proportions.

The complete report on "The Pre-School Blind Child: A Preliminary Study" by Kathryn E. Maxfield, a portion of which was printed in the March 1934 issue of *The Teachers Forum,* may be borrowed from the Library of the American Foundation for the Blind. Those desiring to borrow this pamphlet should get in touch with Miss Helga Lende, Librarian, American Foundation for the Blind, 125 East 46th Street, New York, N. Y.

Our Contributors

Mr. Dale W. Hamilton has been mathematics and science instructor in the Illinois School for the Blind for a number of years. He recently served on the General Science Committee appointed by the A. A. I. B.

Miss Etta Michaels was for years on the staff of the State Teachers College at Milwaukee, Wisconsin. After losing her sight she was associated with the Geography Department of the Wisconsin State School for the Blind, Janesville, Wisconsin during the school years 1931-33, where she carried on some interesting geography projects.

Dr. B. F. Holland, Ph. D., is an instructor in the department of educational psychology of the University of Texas. He is conducting a series of experiments dealing with work for the blind.

Miss Sina Fladeland, a graduate of the North Dakota School for the Blind, has her master's degree in psychology from the Pennsylvania State College. She is a teacher of corrective speech at Perkins.

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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THE MODIFIED DALTON PLAN IN THE MISSOURI SCHOOL FOR THE BLIND

J. H. Botts

The high school organization in the Missouri School for the Blind, for want of a better name, has been termed a Modified Dalton Plan of organization. It is not claimed that this is a perfect plan or that no other plan would work as well. It does not lessen the responsibility of the teacher or noticeably reduce the number of failures among the students. However, it does have certain advantages, especially for schools with a limited teaching force. In the Missouri School two teachers in the high school offer a full four year course of sixteen units credit in literary studies. Since there are many students who cannot be classified as of one particular year and since extensive alternation of subjects must be practiced, it is obvious that every class could not meet every day without conflicts in schedule that would be impossible to adjust. Classes in science, Latin and Spanish, however, still meet with the teacher every day and progress as a class.

In this plan classes in certain subjects, such as history, English, or algebra may meet two or three times a week with the teacher for regular class or "laboratory" work and have the rest of the five periods for group study. These study periods are usually under the supervision of the teacher of that particular subject but when the teacher is otherwise employed the students have the responsibility of conducting their own study. This responsibility naturally tends to develop group leaders to whom members of the group look for help. Frequently, a wholesome competition for this leadership develops, resulting in special efforts on the part of the competitors to prove their usefulness to the group. When groups are divided or, for any reason, lose their leader, some other student must assume this responsibility. Students who had previously been only mediocre in their work have been known to react in a most satisfactory manner when through some shift of circumstances they have been given the responsibility of leadership. This offers an opportunity for developing not only leadership but commendable traits which were previously unknown to both student and teacher, but which the teacher must always be alert to recognize.

The number of groups in any subject is mainly determined by the different abilities and interests of the students. Students of considerable range in I. Q. may be found in the same group due to the fact that their social interests and arrangement of classes may make it more pleasant and convenient for them to work together outside their scheduled study periods. These various groups frequently compete with each other in the amount of work covered and also in the extent to which subject matter has been exhausted. If each student is trying to have his group make a good showing his efforts are an incentive for better work by all and his group with its range of I. Q.'s more nearly represents an adult life situation.

At the regular conference periods with the teacher various methods of procedure may be followed. The entire class may work together on some problem of an individual or group. There is real community pride when one group clears up the difficulties of another. A discussion may arise which will prompt the teacher to make individual or group assignments on topics for further investigation. The teacher may use these periods, or part of them, to satisfy herself that each student is doing his part for in these groups as in adult life there are usually those who are willing that the other members do the thinking while they just drift along. The teacher is just as responsible for the development and progress of the individual child in one type of organization as

in another and must always be on the alert not only to teach when there is a boy or girl ready to learn, but continually to sponsor that condition of readiness to learn on the part of the child. The lazy students who are willing to drift along with the group must be constantly sought out. The method used to arouse them from their lethargy and get them interested to the extent that they become useful members of the group and feel that they belong and are a part of the organization depends on the teacher. It is a problem as old as any school organization and will always be with us. It may help to form a new group or to shift a student from one group to another. But most of the problems of learning are of an individual nature and to solve them the teacher needs all the data possible concerning the child. With a knowledge of his background (parents and home life), his physical condition, his I. Q., and his plans, if any, for the future, something may be done to induce the child to contribute to the group according to his ability.

The budgeting of his time gives the student another responsibility. He is told the amount of work to be covered and he knows how much time he has in which to do this work. As all students are not required to advance at the same rate, one may decide that he needs to spend some extra time on algebra for a few days and consequently may spend less time on his English or history. Since he knows that he must meet the requirements in English and history, he will give them some extra time when he feels that he can slacken his efforts on the algebra. Here again the teacher must be on the alert. Supervision is needed, not as a dominating factor from the point of view of the pupil but as a source of guidance, correction and encouragement, which will tend to keep the student's performance up to the level of his abilities.

Considering the different abilities of the students and their freedom to advance at their own rate one would naturally assume that the different groups will be at varying stages of advancement throughout the year. This is the case and it is found that the range of difference may increase until the last half of the year when it will tend to decrease as the slower groups strive to complete the minimum requirements in each subject.

Most of the students react to the responsibility of time budgeting in a very satisfactory manner. Some, as I have said before, will always need special help. This is true of them not only in school life but also after they get out of school. But I believe that their abilities, their interests, their ambitions, in fact all their traits and characteristics will be developed more in an atmosphere of responsibility than when their work is comprised of definite day by day assignments.

I would not say that this plan is easier to operate than any other. It may be more difficult. In some situations, however, it may be more convenient and it undoubtedly does have commendable features. The group work or community life which it offers is strongly recommended by advocates of the Dalton Laboratory Plan. The responsibility of budgeting his own time is an aid in arousing the child's interest, and interest is an essential in learning. Responsibility well placed is also conceded to be a valuable factor in developing the resources of an individual.

I believe, however, that no plan or system of school organization is the dominant factor in successful education. If a mentally normal student is failing, it would be unreasonable, to say the least, to hold the particular type of organization responsible for the failure. On the other hand, if a group of students is making exceptional progress, the situation very probably is not due, in the main, to the particular type of organization in which they work. The reason for success or failure in either case will usually be found in the teaching personalities and other factors in the class-room, study-room, or laboratory where the actual teaching-learning process takes place.

A METHOD OF DOING GRAPHS

HAROLD W. WRIGHT

In recent years the importance of graphical representation has become more evident through the increasing stress placed on the concept of functionality by authorities on high school mathematics. A less formal evidence of the utility of graphs is their prevalence in magazines, newspapers, books, and business offices where they are both real enough and common. Graphs of general business trends, of weather showing temperatures or precipitations through a period of time, health curves—these and others are typical of graphs met in every-day reading, and to the reader who has a knowledge of the fundamentals of graphs these various curves convey much concise information, clearly expressed. Unfortunately, graphical representation may be abused, for like figures graphs can be distorted in meaning, giving erroneous impressions. However, again like figures, much can be done with graphs and we cannot very well do without them.

Our high school pupils, in their mathematics courses, have felt the need of some quick method of plotting graphs, especially since each pupil hopes to pass the Regents Examinations (Board of Regents of the State of New York) in intermediate algebra. (The Elementary Algebra Examination was discontinued a year ago.) As is generally known, the Regents Examinations are strictly limited to three hours duration, whether the examinee has perfect vision or not. Hence, no factor favoring speed of operation and manipulation can be ignored. The latest examinations in elementary algebra contained graph problems to an extent of 12% to 15% of the entire examination, the examinations in intermediate algebra varying between 12% and 22% in this respect. Even though the Regents no longer send elementary examinations, the algebra pupils are obliged to pass an equivalent examination at the completion of the course in elementary algebra. Certainly no high school teacher or pupil can ignore graphs when preparing for any mathematics examinations, and both teachers and pupils feel that such prominence of a single topic is significant of its general educational worth.

While the following method of plotting graphs by blind students is not presented as the last word on the subject, it has been found of real value, both in the physical manipulation of apparatus and materials and in the presentation of the mental concept of graphs in general. At least, what follows may be suggestive.

Kinds of Graphs Plotted

Any kind of graph encountered in either secondary education or in more advanced mathematics can be plotted. In elementary algebra our syllabus requires the interpretation of bar, circle, straight-line, and continuous-line (broken or curve) graphs, and the ability to plot bar, straight-line, and continuous-line graphs. In addition to the ordinary statistical graphs, the pupils learn to plot equations of the forms: $y = mx + b$ and $y = ax^2$. Naturally, this course also requires the learning of the notation of graphs, including such terms as coordinate, ordinate, abscissa, origin, x-axis, y-axis, x- and y-intercepts, and quadrants. Also, as naturally as possible, the idea of functionality is kept in mind.

In intermediate algebra, verbal problems are plotted as well as equations of the forms: $y = ax^2 + bx + c$, $x^2 + y^2 = a$, $x^2 - y^2 = a$, $xy = a$, $y^2 = ax$, and $ax^2 + by^2 = c$. Also, after plotting one or two examples of each equation the pupils learn to determine from the form of the equation the type of graph the equation will give (straight line, circle, ellipse, hyperbola, or parabola), recognizing from the equation the x- and y-intercepts, the slope of the graph, and relative features. In the construction of graphs of equations the pupils

learn that the circle, ellipse, hyperbola, and parabola are met in studying astronomy and engineering: the sun's annual path is a circle, the path of the moon about the sun is an ellipse, the paths of comets are either elliptical, parabolic, or hyperbolic, depending on whether they are visible once or more than once; railroad curves are parabolic as are the paths of projectiles and thrown or batted balls; the shapes of the sun, earth, and planets are ellipsoids.

Apparatus and Materials

Briefly, the materials and apparatus used are:

1. Coordinate paper
2. Board
3. Straight pins
4. Rubber bands or string
5. Straight-edge (ruler)

1. Coordinate paper. The over-all size of the paper most commonly used in our graphing is 11¼″ x 11¼″, though we do have some paper with over-all dimensions of 11¼″ x 22½″. For the 11¼″ x 11¼″ paper we have brass plates, prepared by the school printer, to print three different sizes of squares. For sake of convenience we shall here call them the large, medium, and small squares. Picture for the large squares, a piece of paper slightly less than a foot square, divided into 144 squares, made of dotted lines, 12 squares by 12 squares. A side of one square is approximately 13/16 inches. This size is especially useful for plotting graphs of equations that give circles, providing the radius of the circle is not more than six units. However, because of the small number of squares, this paper is not otherwise much used.

The medium squares used are practically the same size as are found in the *Second Book in Algebra,* Durell and Arnold, embossed by the American Printing House for the Blind, Louisville, Kentucky. The squares are approximately 13/32 x 13/32 inches, half the dimensions of the large squares, and our brass plate contains 23 x 24 squares. This is the size most easily read by beginners and for text-book use it seems ideal. The *Second Book in Algebra* contains very satisfactory graph material, we find, and an elementary algebra text as adequate in this respect will be welcome.

The small squares measure 9/32 inches on a side, there being 36 x 36 squares on the coordinate paper. This is the size square used almost regularly by our classes. The main advantage of the smaller squares is the ability to plot large numbers or variables on a small space, without using too large a scale.

Thus, on an examination or in class work, the pupil has a choice of three sizes of squares, knowing that for some types of graphs one size is better, while for other types of graphs, another size of square may be used to advantage. If the variables to be represented are extremely large, the largest size of paper, 36 x 72 small squares, may best be used. Of course, any number of sheets might be glued together to make larger paper but multiplicity of squares tends toward confusion.

2. Board. Any material into which pins may easily be stuck serves as the base on which to place the coordinate paper. For about two years our classes used cypress boards covered with felt. Recently, balsa wood boards have been used to our entire satisfaction. Only after sticking numerous pins into what is commonly considered "soft" wood can one appreciate the genuine softness of balsa. Pupils experience no fatigue in continuous plotting on balsa wood, and the pins used to plot the points of the graph are quickly placed and easily removed. Another material that makes a soft base for coordinate paper is cork carpet, but balsa wood is favored.

Balsa wood, much used in making models and in insulation, may be bought in sundry dimensions. We purchase boards an inch thick, six inches wide, and thirty-six inches long. Two such boards are joined together to make a board twelve inches wide, a convenient width and one suited to our

coordinate paper. From such a board three smaller boards, each a foot square, are cut. A light frame of soft pine is made for each board, the frame giving the necessary rigidity to the soft balsa wood. A few boards were made 12″ x 24″ to accommodate longer coordinate paper, when used.

3. Straight pins. These pins are used to plot the actual points on the coordinate paper, the pins being stuck through the paper into the soft wood. The ordinary pin was found to have too small a head for comfortable handling so the glass-headed "beauty" or "toilet" pin has been adopted. Pins at least an inch long are much easier to manipulate in the soft balsa wood than shorter pins, such as map pins. However, if harder wood than balsa is used, shorter pins are much more practicable. Pins longer than map pins tend to bend too easily when pushed into hard wood, thus slowing up the speed of operation.

Thumb tacks have been tried for plotting points on the graphs but the heads of the tacks are so large accurate plotting is difficult and accurate reading of the graph is impossible.

4. Rubber bands. After the points have been plotted on the coordinate paper the pins indicating the points are connected with a rubber band or string, thus completing the graph or curve. Pupils soon learn to put the pins deeply enough into the wood to prevent the easy or accidental withdrawal of the pins under tension of the rubber bands. Further, "toe-nailing" of the strategic pins makes accidents very unlikely. Rather light rubber bands are used and they are never stretched tightly.

Besides being used to indicate the actual graph, rubber bands are used to indicate the axes, the bands being stretched clear across the coordinate paper. This method of indicating axes is used in preference to embossed axes because the position of the axes may be shifted to meet the particular requirements of individual problems. Axes embossed on the paper iteslf would be out of place for some examples encountered.

String could very well be used instead of rubber bands for curves and axes but it has been found that the bands are the more quickly placed and removed.

5. Straight-edge. Such an instrument is used primarily to extend the line of a linear equation. Since it is necessary to plot only two points to indicate the direction of the equation's graph, one edge of the ruler is placed against the two plotted pins and then two other pins are placed at the extreme ends of the ruler, all four pins being on the same side of the ruler. The four pins are then connected with a rubber band and, for all reasonable values of the variables, the graph of the equation is completed.

Methods Employed in Plotting Graphs

1. Temporary Graphs. When introducing the subject of graphs to the pupils in elementary algebra, each pupil is first given all of the equipment listed above. After a brief drill in merely counting the squares on the coordinate paper, a simple bar graph is plotted, using the simpler problems in the text or better still, an original problem. The weights or heights of the pupils in the class may well be used for a bar graph. Thus pupils can readily accept the idea that they are representing their respective weights or heights according to a scale, each square on the coordinate paper taking the place of a certain number of inches or pounds. For example, if the bars are to be placed in a horizontal position and the weight of the heaviest pupil is 150 pounds, 150 is divided by 36 (the maximum number of squares on the square paper) obtaining the quotient 4-plus. Hence, each square must represent not less than five pounds. If it is determined that each square shall equal five pounds, a weight of 150 pounds will be represented by a bar of thirty consecutive squares, counting from the left margin of the paper. A pin is stuck into the paper to indicate the end of that row of thirty squares If the next weight to be represented is 106 pounds, 106 is divided by five and

the quotient of 21⅕ is obtained. Therefore, 21⅕ squares are counted from the left margin of the paper along a second row of squares and a pin is stuck in to mark the end of that bar.

With a little experience the pupils become quite adept in making approximations of fractions of squares, though small fractions are avoided whenever possible, the scale being chosen partially with a view to eliminating as many awkward fractions as possible. After pins have been placed to indicate both ends of the respective "bars," the bars are indicated by connecting the pairs of pins with rubber bands.

Beginning immediately with the first bar graph the labelling of the graph is stressed, though no actual markings are placed on the temporary graphs. On the graph representing the weights of the pupils, each bar must have a name, the name of the pupil whose weight it is representing. Also, the scale used must be noted, as "Each square horizontally, beginning with zero, equals five pounds." No more need be put on the graph.

After several bar graphs have been plotted, a graph showing temperature changes through certain consecutive hours is usually plotted. In such continuous line graphs the idea of two axes is introduced. Only positive temperatures are used first so that the left and lower lines may alone be used as axes. Scales for the horizontal and vertical axes are decided on after determining the range of figures to be represented with the lower left hand corner being used as the starting point in counting squares. In a short time the pupils find that they can save time by counting horizontally and vertically from the last point plotted, being careful to check each point as they go along. When the points have all been plotted, the consecutive points from left to right are connected with rubber bands, thus making a graph from which intermediate readings and observations may be made. Again, the idea of putting the proper notation on the axes and graph is stressed, the essential facts for interpretation alone being indicated, simplicity making for legibility and accuracy.

2. Permanent Graphs. Most of the graphs plotted during the year are temporary graphs, there being no general use or need of graphs except during the class periods. Our real and immediate need for permanent graphs arises in the examinations, particularly the Regents. Incidentally, our method of doing "permanent" graphs has been accepted by the New York State Board of Regents.

Pupils follow exactly the method of plotting temporary graphs on an examination, plotting their points, putting on the rubber band, and formulating, mentally, the notation to be put on the coordinate paper. Having done all of the manual and mental processes, the pupil dictates all information to the teacher in charge of the examination. From the instructions of the pupil the teacher labels the axes, the line or graph, traces the graph with a pencil, and writes on the paper all pertinent data. Having done this, the teacher can then read back to the pupil exactly what has been put on the paper, the pupil making any adjustments and corrections by dictation. After the pins have been removed the result is not a graph which the pupil himself can read but it is an exact portrayal of his own graphing, perfectly intelligible to anyone with vision, and amply testifying to the pupil's knowledge of graphs.

3. General. The above methods of plotting graphs have been used in this school, with variations in equipment, for the past three years. The obvious disadvantage of the methods is the fact that in our class work the pupil does not make a permanent graph, one that he can take from the board and use later. However, with a minimum of assistance from a person with vision, a permanent graph can be constructed. Such a graph is plotted in the usual way by the pupil, the graph then being formed by connecting the pins with string. At each pin or

(*Contiued on page* 39)

DOCTOR ALLEN SAYS:

ON UTILIZING OUR SCHOLASTIC ENVIRONMENT

Spacious suburban sites are now chosen for our residential schools, that nature may help free the spirit of shackled youth and contribute to their health and vigor without their having to forego the cultural advantages of a great city. The Upper Norwood location near the Crystal Palace, London, facilitated hearing the world's best music. From Overbrook our President Cadwalader hoped to attract blind boys to the neigbboring University of Pennsylvania, where he founded scholarships for them. Principal Burritt has been sending out an increasing number of pupils to the two public high schools and in order to do this has attracted a host of volunteer readers, women of the Jewish Guild and Bryn Mawr students. Both he and I opened our buildings for educational meetings: our own teachers might always invite the groups to which they belonged. I recall presenting, in our auditorium, a paper to the Philadelphia Physical Education Society as an introduction to a gymnasium demonstration by our pupils, which paper Dr. R. Tait McKenzie of the University of Pennsylvania used in his text book, *Exercise in Education and Medicine.*

The Watertown location for Perkins has beautifully subserved similar ends. But I recommended it, having in mind inviting the several nearby colleges to use us in their field work. Two Harvard professors had long been bringing small classes to us in South Boston. At the dedication of our new plant, one of these said a former student had recently told him "that such glimpses of wise and faithful service had given direction and enlargement to his whole career; and," so the professor added, "In his name and that of many other such men I thank the school for what it has quite unconsciously and indirectly taught." Since then Dr. Richard Cabot has regularly brought out large groups from Harvard and Radcliffe, to whom I eagerly gave personal conduct and a running explanation of things. Wellesley, Simmons, Boston University, numerous public and private schools, and groups of club women have found us equally hospitable and attentive. But I was specially gratified when a departmental head of the Boston Teachers College, after listening to my course of lectures on the Education of the Blind, began to bring his apprentice teachers for a morning's experience visit. I even put prayers forward an hour that they might see how inspirationally we began our day. Such recognition of our specialty as being educational rather than mere social service I had long been working for. My Harvard class means exactly that.

Since Perkins pays no local taxes, President Appleton wanted us to make ourselves as friendly and helpful as possible in the town. So a Watertown Music Club has held its annual concerts in our hall; and hundreds of public school children at a time have attended the rehearsals of our Christmas carols. We have participated in neighborhood events—pageants, dedications, festivals, etc.—and we have sung in churches and schools, besides joining in boy and girl scout processions, and in certain music festivals in Boston.

Because the practical result of educating blind youth is pretty much what public opinion allows, their frequent mingling with people in all sorts of ways helps improve this opinion. In London, Overbrook, and Watertown every teacher and every pupil was made to feel a personal responsibility to foster this betterment, leading as it does toward a community recognition of the industrial competency of the trained blind and to a raising of their social status.

THE GIRL SCOUT MOVEMENT IN SCHOOLS FOR THE BLIND

Grace S. Burlingham

Milton, the blind, who looked on Paradise!
Beethoven, deaf, who heard vast harmonies!
Byron, the lame, who climbed towards Alpine skies!
Who pleads a handicap, remembering them?
—V. A. Storey

If we want civilization to march forward it will march not only on the feet of healthy children, but beside them, shoulder to shoulder, must go those others—those children we have called handicapped—the lame ones, the blind, . . . All these children are ready to be enlisted in this moving army, ready to make their contribution to human progress; to bring what they have of intelligence, of capacity, of spiritual beauty. —From "The Handicapped Child," one of the reports of the White House Conference on Child Health and Protection.

As these notes are put together October 1, the national Girl Scout organization has information of Girl Scout troops in the following schools for the blind:

School for the Blind, Indianapolis, Indiana.

Kentucky School for the Blind, Louisville

Perkins Institution, Watertown, Massachusetts

Minnesota State School for the Blind, Faribault (2 troops)

Mississippi School for the Blind, Jackson

Missouri School for the Blind, St. Louis

State School for the Blind, Batavia, New York

Catholic Institute for the Blind, New York City (Bronx)

North Dakota School for the Blind, Bathgate

State School for the Blind, Columbus, Ohio

Oklahoma School for the Blind, Muskogee

State School for the Blind, Nashville, Tennessee (2 troops)

Texas School for the Blind, Austin

West Virginia State School for the Blind, Romney

Territorial School for Deaf and Blind, Honolulu (1 blind troop, 1 deaf troop)

Asylum for the Blind, San Juan, Porto Rico (troop, also 1 Brownie pack)

School for the Deaf and Blind, Pasay-Rizal, Philippine Islands (troop of both deaf girls and blind girls)

Some blind and partially seeing girls are reported as members of the interesting troop, meeting in the Winfield Scott School, Elizabeth, New Jersey, which includes also crippled girls and those hard of hearing. There is, however, no reliable information on the number of blind girls living at home who are members of regular Girl Scout troops.

Reports from these troops tell of the girls' development in cooperation and initiative; of their happiness in learning Girl Scout ways of friendliness and helpfulness, in exploring new fields of knowledge through work for Girl Scout badges, most of all in sharing the good times and the service which are Girl Scouting. These reports also speak of the interest and cooperation given the movement by the staffs of the institutions concerned.

It is the hope of the Girl Scout national organization that there may be a growing number of Girl Scout troops in schools for the blind, and of blind and partially seeing girls in regular troops, as superior, trained leaders can be obtained. Every local group and every institution interested in the possibilities which Girl Scouting holds for the blind or otherwise physically handicapped girls is urged to recognize two requirements as of fundamental importance:

(1) Leaders of exceptional quality, possessing above the average fineness of character, sense of responsibility, patience, enthusiasm; a wholesome attitude toward physical disability; Girl Scout training and experience with a regular troop; adequate information, kept up to date, of the limitations, possibilities, and psychology of their girls' particular handicap.

(2) Giving all Girl Scouts—especially the physically handicapped—the spirit and technique of Girl Scouting at its best. *The Girl Scout Handbook,* the patrol system and the Court of Honor are for all Girl Scouts. An able leader will devise different ways of meeting requirements and of turning them into adventure. She will always help the girl to feel that she is richer for a new experience, new tools, wider horizons.

In exploring the possibilities of development of Girl Scouting for the blind and partially seeing, as helpfully and as wisely as possible, the Girl Scout organization is indebted to the American Foundation for the Blind, the American Red Cross, and the National Society for the Prevention of Blindness. The American Foundation for the Blind has been generous in helpful counsel and information. While still the Foundation's supervisor of educational research, Miss Kathryn E. Maxfield, in cooperation with Dr. Bertha Chapman Cady, Girl Scout naturalist, adapted the texts of eight First Class nature projects. These have been transcribed into braille by volunteer workers of the Braille Service of the American Red Cross. The American Red Cross is now completing transcription into braille of the new *Girl Scout Handbook.* It will be complete in eight volumes and will include a number of illustrations. These volumes may be secured directly from the American Red Cross, 315 Lexington Avenue, New York, N. Y., at cost of duplication. The National Society for the Prevention of Blindness and Girl Scouts, Inc., have cooperated in the publication of a large type edition of the *Girl Scout Handbook,* also illustrated. This was issued on October 1, 1934.

The Minnesota School for the Blind has had a Girl Scout troop since 1923. The leader is a teacher of music on the school staff, and has been an instructor in handicraft at camp. She reported, just before the school closed for the summer, a successful and happy week-end camp and that her Girl Scouts are progressing steadily from Tenderfoot to Second Class, from Second Class to First Class. She writes: "We have omitted nothing and tried to maintain a desired degree of proficiency . . We are very, very happy that the Girl Scout program has not been changed or adjusted for us, but that we may endeavor to get as much as possible and do as much as possible."

For three summers a Girl Scout troop in Providence, Rhode Island, has had a patrol[1] of blind girls on summer vacation from Perkins Institution. The leaders report keen interest, and real progress, especially in nature study and outdoor skills, and are enthusiastic over the association of the blind and the seeing. "The blind girls identified nine kinds of trees, having learned them from bringing in leaves, feeling the shape and bark. They shamed us with their keenness in distinguishing fruit trees whose leaves are so similar in appearance."

The Girl Scout troop in the Missouri School for the Blind is fortunate in its leaders. Two are members of the school staff. One is a young business woman with a background of teaching experience. All have had Girl Scout training. They also are fortunate in their helpful and happy relationships with members of the St. Louis Girl Scout Council and staff.

The best adventure of the troop this last year was the swimming, in which several of the girls made good progress. The St. Louis Town Club gave the use of its pool Saturday afternoons for several months. Friends provided their cars for transportation and acted as swimming instructors. Every girl of the twenty-five in the troop was given opportunity to learn to swim. Between November 1 and the close of school, three girls learned to dive, ten passed their

[1] "Patrols are the small permanent groups of from four to eight girls, into which every Girl Scout troop is divided. . . . The Patrols and the Court of Honor form the patrol system, the prime thing that distinguishes all branches of the Scout movement from other organizations of youth."—*Patrols and their Court of Honor,* published by Girl Scouts, Inc.

swimming test and several others were nearly ready to do so. The girls who became dizzy upon entering the water will be given further opportunity, when troop meetings resume, to master swimming.

The Girl Scouts in the Missouri School have attended parties with seeing girls. Through the thoughtfulness of one of the sponsoring group, they have had a wonderful May hike every year. A graduate nurse is to give them instruction in First Aid. They have been self-supporting in their Scout activities from the beginning and they were planning, at the last report, to earn money to meet their camp expenses at the St. Louis Girl Scout Camp.

Contacts with seeing Girl Scouts, feeling themselves a part of the city-wide organization and its activities, the joy and stimulus of friendships outside the school—these are some of the gifts which the Girl Scout movement is bringing to the girls in Troop 83 in the Missouri School for the Blind. The leader reported at the convention of the American Association of Instructors of the Blind in June: "I cannot estimate the results of Girl Scouting in our school but I feel sure that good results are being shown in the lives of the girls as they go through school and as they go to their homes. A disposition cannot be changed in a day, but these girls have shown a wonderful change in cooperation in the troop and in their dealings with those outside the troop. Their willingness to take correction and suggestions the last year and their judgment on problems confronting them have shown a growth which is most gratifying."

The leaders of the Girl Scout troop in the Texas School for the Blind have made membership in the troop an honor, and one not too easily attained. Twelve girls in the upper classes were selected to start the troop. They were chosen for their excellent scholarship, initiative, and ability to cooperate. Every effort was made to have the girls gain a real understanding of Girl Scout principles and master with more than usual thoroughness the requirements for Tenderfoot and Second Class ranks. On the day that the original twelve passed their Second Class tests, each girl was told to bring a friend to the ceremony. These friends were invited to start on the Girl Scout Trail and become members of the troop.

"This was a most interesting experiment. The older Scouts were so anxious that their friends become good Scouts that they did much of the training, not only on the actual Tenderfoot requirements but on the spirit of Girl Scouting as well. The second group became excellent Scouts and carried on most creditably the high standards of conduct set for them by their older Sister Scouts. The interest and appreciation which the teachers show in the Scout program is ample proof that it has come to stay as a very important and delightful part of a girl's life at this school." Recent reports note also that this troop participates in many city-wide Girl Scout affairs.

The national Girl Scout organization is gathering from many sources material for the use of leaders of blind and partially seeing girls. All interested in obtaining further information on the possibilities of Girl Scouting for blind girls and for girls in sight saving classes are invited to write to Girl Scouts, Inc., 570 Lexington Avenue, New York, N. Y. Material free on request includes general information on Girl Scouting for the physically handicapped, Miss Kathryn E. Maxfield's "Girl Scouting for Blind Girls," Mrs. Winifred Hathaway's "Girl Scouting for the Partially Seeing," and a list of the Girl Scout publications now available in braille. Requests for Girl Scout material in braille should be addressed to the New York Chapter of the American Red Cross, 315 Lexington Avenue, New York, N. Y.

"It is like a fairy dream come true to have so much assistance . . . .," wrote the leader of Troop 83 in the Missouri School for the Blind. "The girls say it is the first time that such things have been done so that they may be equal to all of the happy girls every place else and they love that feeling."

WHAT IS A GOOD STUDENT?

SAMUEL P. HAYES

Do we perhaps take too much for granted in dealing with adolescents? If boys and girls are intellectually bright and socially wide awake, it is quite possible that in passing up through the grades they may unconsciously pick up educational ideals and methods of study, especially if they have inspiring teachers who demand the best the children can give. But suppose they are not so bright, or have little social sense, or have been unfortunate in their teachers? What kind of students will they probably become?

Some years ago a number of college professors were asked to write down what they considered the essential characteristics of a good student. Their answers appear in the numbered list printed below. Each statement gives the opinion of one or more professors and therefore in some sense represents a standard by which college students are judged. The answers are given here without any attempt to classify them in logical sequence or to rank them in order of importance.

Last winter this list was passed out to the students in my freshman class in psychology with the request that they grade themselves on each point, using a scale of 5 to 1 in which a grade of 5 should indicate the best, 3 the average, and 1 the poorest among students as they knew them, and to comment upon the value of such a method of self-inventory. The scores showed a normal distribution with the median just above 100, indicating that the class as a whole had a fairly good opinion of itself, for 90 would be an average score, (grades of 3 for 30 items). The students questioned the value of the list as a *measurement* since they felt the teacher could grade them on many points much more exactly than they could grade themselves, and not knowing just what "average" might mean, they feared they might have graded themselves too high, as they evidently did in a small degree. There was very general approval, however, regarding the use of the list for self-criticism and inspiration, and it is for this reason that we are suggesting its use with adolescent pupils in schools for the blind. Many of my students said they had always tried to do what their teachers wished, but never having been told, they did not know what was expected of them, and some expressed amazement that teachers should take into account some of the items on this list. Other students thought the list was of great value as a set of *standards* against which to check up on their own methods and attitudes. Some suggested that the sheet should be kept in sight and used periodically to measure progress and to prevent backsliding.

Would it not be a good scheme for individual teachers to read and discuss this list with their classes, perhaps covering 10 points at each of three meetings, calling on the students for illustrations and amplifying for them such points as seem especially important to them from their own teaching experience?

WHAT CHARACTERIZES A GOOD STUDENT[1]

1. He is well prepared—he does his work.
2. He is punctual—his work is ready on time.
3. He is interested and attentive in class.
4. He makes intelligent contributions in class discussions.
5. He has respect for the superior knowledge of his instructors, and is willing to learn.
6. He is polite and courteous to his teachers and fellow-students.
7. He volunteers to make up back work instead of having to be checked up and required to do so.
8. His work is neat and attractive in appearance.

[1]Crawford, Claude C., *Methods of Study*, Moscow, Idaho, 1926, p. 12.

9. He is neat and clean of person.
10. He is cheerful and pleasant.
11. He is thoughtful and does not rely purely on memory.
12. He has opinions of his own, but is ready to consider new ones.
13. He does some things without being told.
14. He brings to class new material which was not assigned.
15. He can apply what he knows.
16. He has an aim in what he does, but is willing to consider a better one.
17. He sticks to the point, and can follow a line of thought through.
18. He sees things in perspective, and does not think in fragments.
19. He considers every thing in the light of its relative value.
20. He knows what is expected of him, or else he finds out.
21. He follows instructions regarding routine matters to the letter.
22. He uses ink or typewriter in preference to pencil.
23. He talks points over with the instructor after class or in the office when they are not clear.
24. He does not resort to "hand-shaking" or make an insincere effort to win personal favor.
25. He makes constructive suggestions to his teacher when he thinks they will add to the success of the course.
26. He seeks and receives no special favors.
27. He is interested in many phases of life and its problems.
28. He helps improve the morale of the class and to stimulate other pupils to take a greater interest in the course.
29. He can think of things that are not in the book—he has originality.
30. He practices the correct principles from the beginning of the course—he begins right.

The South African National Council for the Blind, Capetown, has distributed an eleven-page pamphlet called "The Blind Child in the Home," written by Mrs. I. J. Lawrence, the Principal of the Athlone Blind School, Faure, C. P. There are three chapters: Prevention of Blindness, The Care of the Blind Infant, and the Blind Child in the Holidays.

THE FOUNDATION LIBRARY

"Perkins Institution and Its Deaf-blind Pupils" by Anna Gardner Fish, is the Perkins Publication No. 11—June, 1934. This interesting pamphlet is a compilation of life stories of the twenty-two deaf and blind pupils who have been educated at the famous school during the years 1837 to 1933. We are told of the pioneer steps taken by Dr. Samuel G. Howe when all the rest of the world declared that the deaf-blind were uneducable. The individual life stories show the development of the methods of teaching the deaf-blind. The author also touches upon the recent establishment of the department for the deaf-blind at Perkins Institution. There are several group pictures.

"The Finger Maze as a Supplementary Test of Intelligence for Blind Children" is the title of an article by Dr. Ralph V. Merry and Dr. Frieda Kiefer Merry in the *Pedagogical Seminary and Journal of Genetic Psychology* for March, 1934. The authors describe an experiment undertaken during the winter and summer of 1932 upon thirty children, eight to sixteen years of age, enrolled in one of the large eastern schools for the blind. The high-relief maze used was the same as that employed by Knotts and Miles. The result substantiated the belief that the finger maze should be a valuable supplement to existing intelligence tests for blind children, especially for those between the ages of ten and fourteen.

For teachers of blind children who read German, an interesting booklet has just been issued in that language: "Handbuch des Blindenunterrichtes" (Handbook on the Education of the Blind) by A. J. Rappawy, a Czecho-Slovakian teacher of the blind. The booklet takes up the various problems that confront a teacher of blind children from the pre-school period through the years when the child is a pupil of an institution for the blind.

ESSENTIALS IN THE EDUCATION OF THE BLIND

Helen J. Coffin

Education in its broadest sense has been defined as a composite of all the experiences of an individual from birth to death. Marie, Grand Duchess of Russia, uses the word in this sense in her autobiography, which is entitled *The Education of a Princess.* This is not a treatise on the influence of school rooms and school masters, which in a limited sense the word education connotes. It is the autobiography of a person who recognized that growth and the development of personality—in other words, her education—came from the tremendously moving experiences of life in the midst of war, revolution, and changing social conditions. Aristotle defined education as "That which leads to freedom and happiness." This is, of course, a philosophical view of the ultimate end of education, toward which man strives as long as he lives. We are familiar with Dewey's philosophy of education, according to which education is growth and living, not mere preparation for life. Who knows what new philosophies are arising out of the maelstrom of thoughts and opinions which are finding expression in these chaotic days?

In a broad sense education for the blind is not properly "special," and its larger aims should not differ from those for all children; but the specific aims, the school curriculum, and the methods and techniques of learning must be adapted for blind children. Through these adaptations blind children have a chance to assimilate the experiences which normal living conditions provide and to utilize these, to the end that they may live fully and share equally in the achievements of the race.

Let us consider briefly the blind child and his education from infancy through the years generally considered for school training. The adaptation of the essential elements in graded school work—subjects, methods and techniques of teaching, and the concomitant learnings—is the responsibility of educators of blind children.

It is exceedingly important that the blind baby have proper home training. This training is a legitimate function of the state or local authority which provides the school facilities for blind children, since it contributes directly to school learning. Blind children who have been given no adequate training during the pre-school period lack the manifold benefits which children derive from proper training during these impressionable years and are often unable to do any school work comparable to their mental age. Parents of a blind baby should be given experienced help and guidance in bringing up their blind child by some visiting home teacher who is trained for this special work. The parents' cooperation in the proper care of the blind child in the home saves a great deal of effort in undoing bad habits, and in dispelling wrong attitudes and tendencies toward dependence and the capitalizing of blindness in later life.

The report of the Special Education Committee of the White House Conference recommends compulsory education for the blind children of all states, and enforcement of the same. This is a point which should be emphasized at the very outset because, unless the child is in school, school training generally does not take place.

Whether blind children are to be placed in institutions or day school classes is a matter for the individual states or communities to determine. The many arguments in favor of each type of education are well known to all familiar with the education of the blind. The essentials in their training, however, should be found equally in both the day school classes and the institutions.

Whether or not the institution or the public school class is available for the blind child, he should be entered in kindergarten when he is mentally and chronologically able

to compete with children of kindergarten age. If he enters a public school he will be in a kindergarten group of normally seeing pupils where he will offer no insurmountable difficulties for the competent kindergarten teacher, although it is desirable that she should have suggestions from the home teacher who has been in contact with the blind child. It would rarely, if ever, happen that more than one blind child would be enrolled in a seeing group at one time.

After a year in kindergarten, where the blind child has learned to run, skip and play with other children, to listen to and obey directions, and to take care of himself in the school room, he enters the braille class. Here the teacher finds that she can be a first grade teacher and not merely a nurse maid to teach the habits which belong to the pre-school and kindergarten periods. The result is that the blind child makes progress through school at his normal mental-age rate, and that the primary classes for the blind are not filled with large, over-aged children who are clumsily trying to do things which their chronological age and physical growth make tragically ridiculous.

The braille classrooms should be pleasant and attractive; tastefully decorated, and with colorful pictures suitable to the grades. Many partially blind children see colors. Even if they do not, they should have pictures, know that they are there, place things on bulletin boards as other children do, and take an interest and pride in plants, fish, and the general appearance of their classrooms. The special equipment required in braille classrooms consists of braille slates and styluses, number slates and cubes, or type; braille writers, braille books, including the texts used daily and also stories for supplementary reading; raised maps, and material to aid in the study of geography, science, and history.

In the City of Cleveland all public school classes are supplied with pictures, exhibits and natural history specimens from the Educational Museum. This is a laboratory museum of circulating materials which are available to all classes, including braille classes, upon request. When a class studies China, for instance, they may have an exhibit with pictures, figures dressed in Chinese costume, and a miniature jinrikisha to study and handle. Although the blind child cannot see the pictures, they may be described orally by the teacher. Public school systems may not all have such circulating exhibits, but most schools have some specimens or are near enough to museums to allow the pupils to visit them. Sometimes blind pupils are allowed more freedom to handle specimens in the museums where the curator cooperates with the braille class teacher than is the case where there is a special collection for the blind specimens of which the children are not allowed to handle for fear of wearing them out. Blind children must have some opportunities to handle stuffed birds, animals, etc. and to examine ordinary things about which the seeing child learns incidentally.

Special subjects for the blind in the schools are braille reading and braille writing; the tactile study of objects, and trips to "see" objects and places in the world about them. In addition, their curriculum should consist of those subjects which are available for normal, seeing pupils—typewriting (this is no longer a special tool as many seeing children also learn to typewrite in the elementary grades), geography, history, music, handwork, physical exercises, manual training, and household arts. Handwork and manual training should be taught by teachers trained respectively in these subjects. In the day school classes these teachers should have an assignment to teach the braille class pupils separately as all blind children cannot compete with the seeing children in shop and laboratory work, although this may be done in the upper grades under exceptionally favorable conditions.

Blind pupils whose aptitudes lie in the direction of manual skills should be placed

in a class of pupils who are given the minimum essentials in academic subjects and relatively more manual training. The blind pupils whose intelligence rating and achievements show possibility of high school or even college work should follow a more general course of study with relatively less manual training. These pupils should also be placed in classes where they may compete as much as possible with normal, seeing pupils.

The public is often critical of the education of the blind because it does not find that schools are training them for some specific job, or life career. It is not within the possibilities of the elementary schools to train any pupils for specific careers or jobs. All of the processes of learning through which the elementary school child passes are contributing to his success or failure in life. These classes can do very little in specialized trade or job training for the immature child. During this school period neither he, nor anyone else, can predict the exact trade, business, or profession for which he should be prepared, especially with our present rapidly changing world conditions. What the school can and does aim to do is to teach habits of work, social attitudes, ability to adjust to groups, and some fundamental skills from which specific skills may be developed at a more mature age. If a seeing boy desires to study medicine, he does not specialize in medicine until comparatively late in his school career. Training for professions demands a certain amount of maturity.

Vocational trade training in the junior high and senior high schools may be questioned even for seeing pupils since today their expectation of obtaining work or being able to pursue any one trade is very slight. On the other hand schools should provide pre-vocational shop work and manual training for selected groups of pupils who find in these subjects the avenue through which they learn social attitudes and habits of living just as other pupils learn these through the study of languages or mathematics. Some children are "thought-minded" while others are "manual-minded," and so it goes with blind pupils.

It cannot be denied that a blind person needs more time and more specific help and practice to perform a manual operation than does a seeing person. Allowance should be made for this either on the job, or after a specific job has been selected for the blind applicant. Some communities provide for this under a special placement worker. It would seem entirely possible for the larger communities to arrange for this in a central training shop for blind workers, or for the institutions to offer post-school work, as some of them now do.

In any class of blind children many variations in intelligence, social adaptability, attitudes and desires are found, so that any specific training becomes almost an individual instead of a group concern with these small numbers. Both the day schools and the institutions should offer educational and vocational guidance, including psychological tests, and health diagnosis, and utilize every known device to determine the aptitudes of the individual boy or girl. Post-school trade and occupational training could then be offered in designated localities where a number of blind students could be assembled.

During their school years blind pupils should have guidance by a counselor trained both in guidance and in work for the blind. Only such a person can help a student to select courses which are of the maximum benefit to him and most economical of his and the school's time. Each child should be directed in his thinking toward some future career, and the teacher and counselor should attempt to discover his aptitudes for certain careers. Finally, in obtaining his first work, the blind boy or girl should have some help from a person connected with his school training, and familiar with the blind workers and the employment situation. The logical person for the placement work is the vocational counselor.

This brings us to emphasize the need of training for the blind in habits and social attitudes. Personality, intangible as it may be, is one of the largest factors in obtaining and keeping work. Desirable traits and habits, the sum total of which is personality, are paramount for the seeing workers of today. They are the same for the blind workers.

How may the blind child grow during his school years in order to learn to live successfully in a world of seeing people when he goes out from the classroom? Blind people are not a class. They present as many variables in temperament, environment, and hereditary influence as any other group. The problem of the school is to develop their assets, to minimize their disabilities, but never to disavow the visual defect. A blind person's career must be fashioned to surmount blindness, not to exploit it or accept it without effort to make adjustments. Unfortunately successful achievements on the part of a blind person are frequently impeded by the traditional attitudes of the public and sometimes even the families of the blind. A great deal may be gained if the blind child can win the successful cooperation of the family. People often look upon the blind as mere recipients of help. If this idea can be changed, and persons convinced that many blind people are prepared and willing to work, the tragedies which occur when a blind applicant seeks a position can be averted.

The blind suffer also because of the erroneous public opinion that they are all mentally defective, or that they are all in ill health, deaf, or emotionally "queer." Every blind child has a right to grow up free from the inference that he is mentally defective unless this is so proved. Much harm has been done to the physically handicapped group of children because they are sometimes compelled to associate in school with sub-normal children. The blind child should grow up in a community of normal persons where some of his associates are seeing. If this is not possible, his associates should be blind children of normal mentality. Blind children should be urged to be scouts; to go to church or Sunday school, if this is done in their family; and to share in other activities of childhood with seeing children. This will not only help them directly, but it will also react upon the seeing community and help it to acquire a consciousness of blind persons as normal human beings.

With the help of the braille class teacher, the blind child should do his part to strengthen the bonds of understanding and mutual helpfulness and companionship in his home. If this is not a definite part of the blind child's school education he may grow up selfish and uncooperative and, through his own fault, find himself severed from the needed family ties. This is more difficult when the child is sent to school away from home. The family becomes accustomed to freedom from responsibility for the blind member and may fail to accept the care and responsibility of the adult whom they have not learned to understand. Here again the visiting home teacher's services are needed to maintain contact with the parents of the pupil and to prepare them to do their part toward the education of their child. The essentials in the education of the blind child should include, in addition to courses of study adapted to individual needs and differences, very definite social training extending beyond the braille classroom in order that the child may learn how to live successfully as a blind adult in a seeing world.

One seldom hears tribute paid to Helen Keller for her truly marvelous achievements without hearing also of her teacher, Anne Sullivan Macy. Helen Keller is one of the world's great personalities, but her opportunities for education, for living in the fullness of everyday experiences which she has so marvelously assimilated, were opened for her by her teacher.

The selection and training of teachers of blind children are both every important factors. They should have normal or college

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A PLAYFIELD PROGRAM IN A SCHOOL FOR THE BLIND

Roy Thomas Howard

The average boy or girl, upon enrolling in a school for the blind, is comparatively young, usually between six and twelve years of age. The child at this age is not usually well grounded in the fundamental principles of a wholesome life. Hence it becomes the duty of the school to mold this young boy or girl into a useful and desirable citizen.

It has been found that character is formed during the period of leisure to a greater extent than during classroom work. The basis of character is the will and at no time does this function of the mind have so free a scope as during the play period. It is here that boys and girls learn the significance of cooperation and group action, particularly in those games requiring team work. Many develop self-control for the first time, and it is at play that they learn to recognize the cheat, and the poor sport.

With these facts in mind, and with the desire to give our boys and girls a natural and wholesome environment for play, we embarked upon an intensive playfield program for the entire student body. The following games were organized: horseshoes, peggy, sandbox contests, bowling at ten pins, chinning bar, teeter, swinging games, grease poles, croquet, marbles, volley ball, circle games, hemenway ball, shinny, old sow, tether tennis, kick for goal, touch football, and on the final day a costume parade.

We have succeeded in bringing practically every child in the student body into some wholesome play activity. For the totally blind young boys and girls, there is the sand box, in which contests are held each Saturday and a small prize given to the one building the most original sand project. There are also the swings, teeters, slides, and chinning bar for the young and intermediate boys and girls. The chinning bar has proved to be very successful with the girls. For the older boys and girls the following group games are stressed: croquet, volley ball, shinny, kitten ball, circle games, relays, hemenway ball, peggy, and horseshoes.

The totally blind students take part in all these games, and while they do not play them particularly well, they at least develop a healthy, normal reaction toward winning and losing. For example, in pitching horseshoes, we have two seeing boys play with two blind ones. The former stand by the stakes and shout encouragement to their blind partners. By shouting they give their partners a direct line to the stake, and when a good pitch is made there is as much excitement as if the champion had just made a ringer. In bowling ten pins on the lawn, we have some totally blind boys who roll a better ball than some of the partially blind boys. The blind boys are given the direction and the rest is easy. The boys thoroughly enjoy this game, and the apparatus is very easy to construct.

To give added zest, and to furnish an incentive for the continuance of our playfield activities on a permanent basis, we have organized tournaments and contests to pick out the ones most proficient in each sport played. At the end of the year we will have found by a process of elimination the champions in the following activities: horseshoes, peggy, chinning bar, croquet, best volley ball team, marbles, maker of most original sand project, tether tennis, bowling at ten pins, shinny, and the best football punter. To the champion of each activity goes the honor of having his or her name inscribed upon the silver plaque designated for all of the school's athletic heroes.

One of the most interesting contests of the playfield program is the costume parade in which the entire student body takes part. It is held on the last day of the school's playfield program. The boys and girls can dress up to represent any character they wish, and

many show unusual originality. This contest brings the playfield program to a close.

This program has been carried on by the instructor for the last four years and has been very successful in promoting a normal, healthy, happy group of boys and girls. Each child has learned many of the fundamental principles of good citizenship.

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point a bit of glue or paste may be placed. As soon as this glue has dried, the pins may be removed. On the margin of the coordinate paper or on another sheet of paper may be written, in braille, all of the information needed for an interpretation of the graph. The pupil then has a permanent graph, the product of his own manipulation.

To counter the possible criticism of our failing to make permanent graphs in our regular class work we cite the accuracy of this method and the legibility of the graph while the rubber bands are still on the paper. Other compensating features are the speed with which graphs may be plotted as well as the variety of graphs plotted and their similarity to inkprint graphs.

While an especially soft wood is used in our class work, a pupil, on leaving school, may make his own graphs by substituting, as we have done, soft pine for balsa wood, and brads for pins. With a small hammer the points on the graph may be readily plotted and the permanent graph formed on the board. A card board backing for the coordinate paper might well be used together with plain pins.

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training equivalent to that required of teachers of seeing children in the community. In addition, they should know how to teach braille; they should have some knowledge of work for the blind; they should have a love for the work and for blind children, devoid of maudlin sympathy; they should have high standards of educational achievement, but infinite patience with each child in accordance with his aptitudes; they should have tact and forcefulness in dealing with parents and others on matters pertaining to the social education of the child; they should be professional and progressive in their educational thinking and philosophy. In short, the teacher of blind children should be an exceptionally successful teacher who, in addition, has interest and enthusiasm for work with blind children and training in this specialized field.

A book of great interest has just been received from Germany, "Plastische Arbeiten Blinder" (Modeling by the Blind) by Ludwig Münz and Viktor Löwenfeld.

The book contains independent essays by each of the two authors. Dr. Münz devotes considerable space to a discussion of the teachings of Johann Gottfried Herder and is able to trace many of his findings back to the theories of this classic German philosopher. In the final chapters he deals with the fundamental basis for space and form ideas that the blind and the seeing have in common.

Mr. Löwenfeld describes his methods of teaching modeling to the blind. There are 96 pages of illustrations. Many of these illustrations show the development in the individual pupil of his understanding of the world about him.

Forum readers will be interested in the October, 1934, issue of the *Outlook for the Blind* which contains a detailed announcement of the fourth annual literary competition for blind people throughout the world conducted by the National Institute for the Blind in London.

Correction of typographical error in the September *Forum*: the word *he* in Column 2, line 10 of "Dr. Allen Says" should read *she,* referring to Winifred Holt Mather.

THE TEACHERS FORUM
for
Instructors of Blind Children

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The Editor will not be responsible for opinions expressed in signed articles.

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CERTIFICATION OF TEACHERS

An adequate program of special certification for teachers in schools for the blind is gradually coming to the fore as one of the problems that must be faced by educators of blind children. In 1932 at its biennial convention, the American Association of Instructors of the Blind appointed a committee to consider the question of "Qualification of Teachers."

At the 1934 convention of the same organization, Dr. P. C. Potts, Superintendent of the Idaho School for the Blind, a member of the above committee, presented a report on the subject "The Certification of Teachers in Schools for the Blind" in which he outlined a tentative three-fold certification scheme for academic, vocational, and music teachers. By resolution the members of the convention went on record as approving the proposals in principle, and requested the continuance of the committee's activities with the hope that a constructive plan might be developed, leading to the professionalization of work for the blind in the field of education. With the present conditions—marked by the varying requirements in qualifications of the day school and the residential school teacher, the diversity of salaries, and the limited opportunities for special preparation for the work—the teaching of blind children can hardly be said to rank today as a profession in the true sense of the term. Most teachers will welcome any move which will lead to the raising of present standards of teaching in residential and day schools for the blind.

Readers of the *Teachers Forum* are urged to study Dr. Potts' report in the proceedings of the thirty-second biennial convention of the American Association of Instructors of the Blind, pages 207-211, inclusive.

Our Contributors

Mr. J. H. Botts is principal of the Missouri School for the Blind. He was also a member of the Committee of the A. A. I. B. which formulated the course of study in General Science for use in schools for the blind.

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Mrs. Grace S. Burlingham, vice-president of Girl Scouts, Inc., and a member of the National Girl Scout Executive Committee, is directing all activities related to the development of Girl Scouting for the physically handicapped. She has been an active member of the St. Louis Girl Scout Council for several years.

Dr. Samuel P. Hayes, Professor of Psychology at Mount Holyoke College, South Hadley, Massachusetts, is already well known to *Forum* readers.

Miss Helen J. Coffin is Supervisor of Braille and Sight Saving Classes in the Cleveland Public Schools, in which capacity she has served for a number of years.

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The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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BUSINESS RELATIONS AND OCCUPATIONS AS TAUGHT AT THE MINNESOTA SCHOOL FOR THE BLIND [1]

M. R. Vevle

"Business Relations and Occupations" as taught at the Minnesota School for the Blind is a unified course recommended for the children of the ninth year of school in the junior high school period. The primary purposes of this course are to give the pupils:

1. A definite knowledge of certain business facts and practices carefully selected on the basis of the frequency with which they are found essential to the successful handling of one's personal business affairs.
2. Adequate skill in the use of certain devices, procedures and manipulations without which any individual is handicapped in his personal business relations.
3. A knowledge of the various activities by which the world's work is carried on to the end that every person may possess an intelligent and cooperative attitude toward all industrial, commercial, and professional groups and toward the obligations of each group in its relations to the welfare of society as a whole.

This course is in no sense vocational. It is not designed to give knowledge or skill having a complete or immediate wage-earning value. This conclusion is based upon the educational viewpoint that vocational training should be deferred until the senior high school period, or later; that the junior high school years are properly the period for general education of such character as to broaden the outlook of pupils at the time when the urge to find their places in the social organization begins to assert itself.

In a very real sense, school education as a whole can be justified only as it assists in preparing for useful service to society. But this service is not limited to one's specific vocation. It involves a consideration of all social responsibilities—family, neighborhood, civic, occupational. The more effective school education becomes in accomplishing these ends, the better is the service rendered to the social organization. This course is built upon the assumption that these general aims are best emphasized during that period of education when the attitudes and responses of childhood are unfolding into social consciousness, when the processes of thinking, feeling, and doing are taking on permanent form, and when, if ever, the foundation is laid for good citizenship.

Again it should be said that the offering which follows is not primarily vocational. It possesses, however, incidental vocational values which should not be overlooked. Ultimately every person will be faced with the necessity of choosing a field in which to earn a livelihood. The training offered in this course will help in making the choice one of wisdom rather than caprice. It is intended to assist pupils to explore and teachers to guide.

In the entire field of business relations there is need for specific knowledge of business principles. The need is not limited to those engaged in business pursuits. It applies as well to the professional man, the laborer, the farmer, the housewife. A knowledge of business form, of costs and how to determine them, of the principles of thrift, of the proper use of savings, and of the transactions relating to real estate and other simple contracts, is of primary importance to every individual, whatever his occupation may be. This information must be complete in itself, having as its aim the preparation of the individual to carry on his own personal business with intelligence and efficiency.

The introductory bulletin in the high

[1] Complete information on this course can be secured from Bulletin A-6, distributed by the State Department of Education for Minnesota. The bulletin can also be obtained from the Syndicate Printing Company of Minneapolis, Minnesota.

school curriculum series as distributed by the State Department of Education of the State of Minnesota defines the general objectives of secondary education as (1) health, (2) civic-moral-social responsibility, (3) recreational and esthetic participation and appreciation, and (4) occupational efficiency.

The course in Business Relations and Occupations is closely related to the second of these objectives. Civic, social, and moral responsibility on the part of the individual should be fostered by a study of the importance of such items as thrift, the budgeting of one's money and time, the cooperative protection made available by the various types of insurance, and the services of such agencies as the post office department, the railroads, telephone, telegraph, and express companies.

If this course does assist the pupil to become efficient in his earning, to form habits of thrift, to budget his time and money, it should contribute to efficiency in the handling of personal business affairs and thereby tend to make it possible for him to enjoy more fully the true satisfaction of life, including participation in wholesome recreational activities and appreciation of the esthetic beauty of nature and in art.

The objectives, therefore, of this course are to help the pupils to

1. Acquire habits of thrift through the intelligent handling of their money, property and investments.
2. Acquire accurate knowledge of the fundamental business practices and experiences which will enable them to handle their own personal business affairs efficiently.
3. Prepare to use the more important business services, machines, devices, and commercial papers and forms with which they may come in contact.
4. Discover those aptitudes, abilities, and interests which will play a large part in their choice of a vocation.
5. Acquire accurate knowledge of vocational opportunities, conditions of employment, promotional opportunities, training needs, and the fundamental requirements for success in each of the major fields of activity.

The content material of this course as announced in Bulletin No. A-6 of the Minnesota State Department of Education is listed below. That part of this material which is not applicable to blind students is either left out or given such emphasis as its application to the blind will warrant. In many cases it is practical for the blind to know something about the items that are listed even though they may not be able to make actual use of the knowledge. This is true with such items as filing and indexing, the use of business machines, certain items under business arithmetic, some business forms, a few law forms, and the study of some of the activity fields. We have found it practical to include most of the material listed.

I. COMMON SKILLS
- A. Penmanship
- B. Typewriting
- C. Business Letters
- D. Business Arithmetic
  1. Fundamental processes
  2. Fractions and percentage
  3. Graphs
  4. Business activity problems
  5. Home activity problems
  6. Bank interest
- E. Ruling
- F. Filing and Indexing
- G. Using Miscellaneous Business Machines
  1. Duplicating machines
  2. Check protectors
  3. Adding machines
  4. Cash registers
  5. Addressing machines
  6. Dictating machines
  7. Paper fasteners, package-tying machines, paper cutters, and tape sealers

II. THRIFT
- A. Earning
- B. Spending
  1. Wise spending
  2. Budgeting
- C. Saving and Investing
  1. Factors to be considered in investing money
  2. Life insurance

3. Home ownership
4. Savings account in bank
5. Certificate of deposit in bank
6. School savings account
7. Postal savings
8. Retirement or pension funds
9. Building and loan associations
10. Mortgages
11. Stocks and bonds
12. Promotion projects
13. Dealing in margins

III. COMMUNICATION, TRANSPORTATION, AND TRAVEL
- A. Communication
  1. The telephone
  2. The postal service
  3. Other facilities for sending messages
- B. Transportation
  1. Express shipments
  2. Freight shipments
- C. Travel Information
  1. Railroads
  2. Bus
  3. Airplane
  4. Foreign travel
  5. Hotels
  6. The traveler's money

IV. BUSINESS FORMS
- A. Relating to Merchandise
  1. Invoice
  2. Monthly statement
  3. Credit memorandum
  4. Sales on approval
  5. Sales on installment
  6. Terms
- B. Relating to Banks
  1. Signature card
  2. The checking account
  3. The savings account
  4. Forms of negotiable paper
  5. Note-due notice
  6. Interest and discount
  7. Indorsements
- C. Relating to Money Transactions with Others
  1. Paying
  2. Borrowing

V. TAXATION
- A. National Taxes
  1. Financial needs of Federal Government
  2. Taxing power vested in Congress
  3. Sources of revenue, such as income tax, excise tax, customs
  4. Amount of tax, total and per capita
- B. State Taxes
  1. Financial needs of the State
  2. Taxing power vested in legislature
  3. Sources of revenue, such as gross earnings tax, inheritance tax, general property tax, gasoline tax
  4. Amount of tax, total and per capita
- C. Local Taxes
  1. County
  2. Township
  3. City and village
  4. School district

VI. BUSINESS LAW AND LAW FORMS
- A. Laws As Legal Rules to Govern Conduct
  1. Common law
  2. Rules of equity
  3. Statute laws
  4. Constitutions (Federal and State)
- B. Contracts
  1. Promissory obligations
  2. Non-enforceable contracts
  3. Discharge of contractual obligations
- C. Transfer of Property
  1. By voluntary act
  2. By operation of law
- D. Transfer of Property of Deceased Persons
  1. By acts of the parties
  2. By operation of law
- E. Employment Relations
  1. Master and servant
  2. Principal and agent
  3. Independent contractor
  4. Employer's liability for injuries
  5. Surety bonds
- F. Negotiable Instruments
  1. Formal requirements
  2. Transfer
  3. Liabilities of parties
  4. The rights of holders
- G. Business Organization
  1. Individual ownership
  2. Partnership
  3. Corporation

VII. PERSONAL QUALITIES ESSENTIAL FOR OCCUPATIONAL EFFICIENCY

A. Character Traits
B. Personality Traits
C. Social Traits

VIII. ACTIVITY FIELDS

A. Agriculture
1. General farms and plantations; grain, stock and dairy farms; cotton, sugar, rice and tobacco plantations
2. Specialized farming: gardens and greenhouses; orchards and nurseries; poultry, stock and dairy farms

B. Business Pursuits
1. Independent merchant
2. Store manager: chain store; department store; consumers' cooperative store; company-owned store
3. Department manager in a large establishment
4. Banker
5. Stenographer
6. Accountant
7. Photographer

C. Salesmanship
1. Retail selling: buyer, sales clerk, and shipping clerk
2. Wholesale selling: city salesman and traveling salesman
3. Specialty selling

D. Manufacturing Industries
Note: This classification is taken from the Federal Census of 1930
1. Building and construction
2. Chemical and allied industries
3. Cigar and tobacco
4. Clay, glass and stone
5. Clothing
6. Food and allied industries
7. Iron and steel
8. Machinery and vehicle
9. Metal
10. Lumber and furniture
11. Paper, printing and allied industries
12. Textile
13. Miscellaneous manufacturing

E. Building and Construction
1. Contracting: general and special
2. Position as foreman
3. General labor not specialized: plumbing, electrical construction; brick and stone laying; carpentry; plastering; cement construction; printing; decorating; steel and metal construction

F. Transportation
1. Water: captain, engineer, and mates; sailors and deck hands; longshoremen
2. Steam and electric railroads: managerial; office work; workers in operation department; shopmen; train and engine crew
3. Automotive: managerial and driving
4. Aeronautics

G. Professional Pursuits
1. Medicine
2. Dentistry
3. Law
4. Ministry
5. Nursing
6. Dietetics
7. Home-making
8. Education: administrative, supervisory, teaching, library
9. Architecture: building and landscape
10. Engineering: mechanical, electrical, civil, chemical, mining, architectural
11. Pharmacy
12. Music
13. Journalism: reporter, editor and critic
14. Authorship
15. Certified public accountancy
16. Social service
17. Forestry
18. Horticulture
19. Undertaking

H. Trades
1. Printing
2. Auto mechanics
3. General mechanics
4. Carpentry
5. Cabinet making
6. Plumbing
7. Brick and stone laying
8. Metal construction
9. Painting
10. Decorating
11. Electrical construction
12. Plastering

13. Cement construction
14. Steel construction

IX. SUCCESSFUL MEN AND WOMEN

A. In Agriculture
1. Stephen M. Babcock
2. L. H. Bailey
3. O. A. Haecker
4. Perry G. Holden
5. Henry C. Wallace

B. In Architecture
1. Daniel H. Burnham
2. Cass Gilbert
3. Richard M. Hunt
4. Charles F. McKim
5. Henry Hobson Richardson

C. In Aviation
1. Charles A. Lindbergh
2. Wilbur and Orville Wright

D. In Banking
1. Edward W. Decker
2. J. Pierpont Morgan

E. In Business
1. John D. Rockefeller
2. Julius Rosenwald
3. John Wanamaker

F. In Education
1. Charles W. Eliot
2. William Watts Folwell
3. Horace Mann
4. Maria L. Sanford

G. In Engineering
1. George W. Goethals
2. Herbert C. Hoover

H. In Exploration
1. Roy Chapman Andrews
2. Richard E. Byrd

I. In Horticulture
1. Luther Burbank

J. In Invention and Science
1. Alexander Graham Bell
2. Sir Henry Bessemer
3. Marie Curie
4. Thomas A. Edison
5. Michael Faraday
6. Robert Fulton
7. Charles Goodyear
8. Guglielmo Marconi
9. Cyrus Hall McCormick
10. Samuel F. B. Morse
11. Eli Whitney

K. In Journalism and Authorship
1. Edward Bok
2. Horace Greeley
3. Oliver Wendell Holmes
4. Sinclair Lewis
5. Henry Wadsworth Longfellow
6. Mary Roberts Rinehart
7. Ole E. Rolvaag
8. Harriet Beecher Stowe
9. Mark Twain (Samuel L. Clemens)

L. In Law
1. Charles Evans Hughes
2. Frank B. Kellogg

M. In Manufacturing
1. Andrew Carnegie
2. Peter Cooper
3. Harvey S. Firestone
4. Henry Ford
5. Charles M. Schwab
6. Gustavus F. Swift

N. In Medicine
1. Adolf Lorenz
2. William J. and Charles H. Mayo
3. Louis Pasteur

O. In the Ministry
1. John Ireland
2. Martin Luther
3. John Wesley
4. Roger Williams
5. Henry Benjamin Whipple

P. In Music
1. Amelita Galli-Curci
2. John Phillip Sousa

Q. In Nursing
1. Clara Barton
2. Florence Nightingale

R. In Social Service
1. Jane Addams
2. Julia Lathrop

S. In Transportation
1. Edward H. Harriman
2. James J. Hill
3. Donald McKay
4. Cornelius Vanderbilt

T. In the Trades
1. Samuel Gompers
2. John Mitchell
3. William B. Wilson

U. In Unclassified Fields
1. Susan B. Anthony
2. Benjamin Franklin
3. John A. Johnson
4. Helen A. Keller
5. Abraham Lincoln
6. Wendell Phillips
7. Theodore Roosevelt
8. George Washington
9. Woodrow Wilson

WHERE DID THAT SOUND COME FROM?

Samuel P. Hayes, Ph. D.

Apparently the seeing will never stop wondering at the feats of blind people. The fact that the blind are not universally superior to the seeing in sensory acuity has been hailed as news all over the country since the publication of the article on sensory compensation in *The Teachers Forum* a year ago. And the December *Atlantic Monthly* carries an article full of anecdotes about the blind which are still regarded as "miraculous" in spite of the extended experimental proofs offered in the author's articles this year in the *Outlook for the Blind.* It is apparently so difficult for people to get the essential point in this question that a further attempt to make it clear seems imperative. Fortunately we have new experimental evidence with which to "point the moral," and this evidence shows the *presence* of compensation where an activity has been practiced, thus serving as a companion article to the former ones, where the *absence* of the expected compensation was explained by the lack of practice in the activity tested.

As a matter of fact, we are all *wonderful* both physically and mentally. The eye and the ear are two marvellously complicated mechanical servants whose gift to us in our rich experience of sights and sounds is patent to all, but whose intimate workings are still a challenge to scientists in spite of their equipment of optical and acoustic instruments. Physiologists have taught us much about the microscopic structure of the eye and the ear, have traced their nerve bundles to particular parts of the brain and erected theories of vision and audition. But the theories are conflicting and the psychologist is still waiting for a satisfactory explanation of the wealth of mental experience he attributes to these two fundamental sense organs. And it is equally wonderful that most of us come into the world with both of these intricate mechanisms in good working order. With a disposition to wonder, nature gives us plenty of opportunity, and science with its microscopes and telescopes is constantly giving us fresh surprises.

It is certainly a special cause for wonder that we are able to tell where any sounds come from, for the ear is not a spatial organ. It seems easy to explain the location of touches on different parts of the body, for our skin is spread out like a map; similarly the retina of the eye may be regarded as a small map or picture corresponding to the external world which is constantly projected upon it point for point, so that we know that one light is to the right while another is to the left, because they affect different sides of the retina; but in the ear we have no such spatial correspondence. Air waves are collected by our external ear as in a funnel, and moving down the auditory canal, they set into vibration a series of mechanisms which finally affect hair cells in the inner ear and these in turn are connected with nerve fibres. And yet we are able to tell whether sounds come from the right or the left, and we can make pretty good guesses about many other positions. We can also estimate the distance of sounds from us if we recognize the source of the sound and if the atmospheric conditions are normal, though we are subject to strange illusions at times. Who has not been uncertain whether he is listening to the bark of a small dog in his vicinity or a large dog at a distance? Whether that sudden and persistent buzzing is caused by a fly on the window sill or an airplane overhead?

The experiments to be reported here were undertaken to see how well blind students could localize simple sounds near the head, when presented in various positions in a circular horizontal plane with the head at the center of the circle. Each blind subject was seated at the center of a six foot circle drawn upon a large sheet of brown paper upon which numbers had been printed to

correspond with the numbers on a clock, and any subjects having a remnant of vision were blindfolded. (In the later experiments with seeing students at Mt. Holyoke College, all subjects were blindfolded as they entered the testing room and the numbers were printed on the bare wood floor.)

Then the following instructions were given: "You are sitting at the center of a large circle drawn upon the floor. Points are marked and numbered around the circle to represent the face of a clock. Directly in front of you is the figure 12, a little to the right is figure 1, then 2 is here, and directly to your right is figure 3." The experimenter stood in the various positions as she mentioned the numbers, to give the subject a chance to hear the sounds from these various directions. "Next is 4, here, then 5 and directly behind is 6, opposite the 12. A little to the left we come to 7, then 8 and then 9 directly to your left. Then 10, 11, and back to 12 in front of you."

Continuing, the experimenter said: "In my hand I hold a clicker," sounding several times the Politzer acoumeter, a simple apparatus consisting of a small metal bar so constructed that it will fall a standard distance to strike another metal bar with a standard intensity of sound, "I shall sound this at different places around the circle and I want you to tell me where you think the sound comes from. If a sound is directly in front of you, you should tell me it comes from 12, if directly at the right, you should say it comes from 3, etc. Now I do not want you to hear me as I walk about, since that would give you an idea as to where I was going to click, so when we are ready to begin I shall ask you to press your fingers lightly into your ears. I will then walk around to the position where I want to be, touch you lightly on the top of the head, like this" (illustrating by a light touch on the top of the head with a stick), "as a signal for you to open your ears while I sound the clicker. You will then tell me where you think the sound comes from and close your ears while I record the results and take a new position. You will please keep your ears closed until you get the next signal on the head. I will now give you one preliminary trial which we will not count. Remember you are to close your ears till tapped on the head; then you are to open your ears, listen for the click, judge and report its position and close your ears again, keeping them closed while I record your judgment, move into a new position, and tap you on the head again. Ready, close your ears."

The experimenter then clicked the instrument in some position that was not to be the first in the regular series. Then the test was begun, and trials were made starting from any position, and using for each successive trial a position five "hours" in advance of the position before. After going through the whole set of positions once the experimenter said, "Now we have been all around once, and if you are not too tired I would like to go around again. Shall we begin now?" The blind subjects entered into the experiment with great interest, regarding it as a game and there were no indications of fatigue. As it took only about twenty minutes the college students found it very easy.

This experiment was first carried out by Miss Ruth Sargent at the Pennsylvania Institution for the Blind, using as subjects all the pupils who were old enough or intelligent enough to take part in it. She tested 49 boys and 54 girls with vision ranging from 1/10 normal to total blindness, with ages varying from 10 to 35 years with a median age of 16.1 years, and with intelligence quotients ranging from 66 to 138 with a median I. Q. of 94. The experiment was repeated by Miss Helen Peck, using as subjects 60 girl students in the author's freshman psychology classes at Mount Holyoke College.

The results were tabulated and curves drawn to show the percent of correct guesses for each of the twelve sources of sound. As the curves showed the same trend for the

first and the second series, and the second series was generally better, it seemed reasonable to consider the first series as a practice series, and base our conclusions on the second series in each group. Table I shows the percentage of correct responses for each source of sound for the second series.

TABLE I.
PERCENT OF CORRECT RESPONSES IN SOUND LOCALIZATION

Source of sound	49 Blind Boys	54 Blind Girls	60 Seeing Girls
3 o'clock	39%	42%	50%
4 "	41	39	55
5 "	51	50	50
6 "	84	74	53
7 "	59	48	55
8 "	32	37	46
9 "	37	26	43
10 "	33	15	36
11 "	65	52	35
12 "	76	63	58
1 "	59	40	45
2 "	26	31	38
Median	46	41	48

In median attainment the seeing girls seem to be slightly superior to the blind boys, and more superior to the blind girls, but the range of their scores is much narrower—only from 58 to 35% correct, and there are no very high scores. Both the blind groups show great superiority in locating sounds from around 6 o'clock and 12 o'clock, rising well above the highest seeing record which is 12 o'clock; and both blind groups show a wide range of scores.

Table I was constructed by using only such guesses as were exactly correct, paying no attention to guesses which were more or less wrong; therefore, it gives a somewhat incomplete picture of the results. If all the responses had been either correct or only one hour away from the real source of sound, our first comparison might be considered decisive; but since the responses for sounds from some of the sources were limited to a small range, while the responses for sounds from other sources were widely scattered, occasionally being complete reversals (a sound from 6 was attributed to 12 or assigned to any position from 10 to 7), it seemed desirable to tabulate the results to show the amount of error for the different groups of subjects when stimulated by sounds from the various positions.

Table II was constructed in the following manner. The different errors were given values, such that a displacement of one hour —as when a sound from 2 was located at 3—was given an error value of one, a displacement of two hours an error value of two, etc. up to an error value of six for a complete reversal. The number of errors for each sound source was then multiplied by these values and a total error obtained for each group for sounds from each source. This total error for the group was then divided by the number of subjects in the group to give the average error per subject; these values appear in Table II, and most successfully complement the data of Table I.

TABLE II.
AVERAGE AMOUNT OF ERROR IN SOUND LOCALIZATION

Source of sound	49 Blind Boys	54 Blind Girls	60 Seeing Girls
3 o'clock	.77	.84	.57
4 "	.63	.80	.50
5 "	.69	.63	.92
6 "	.26	.64	2.11
7 "	.51	.81	.89
8 "	.88	.61	.58
9 "	.78	.95	.68
10 "	.80	1.31	1.08
11 "	.51	.91	1.51
12 "	.63	.83	1.21
1 "	.84	1.07	1.25
2 "	1.09	1.00	.97
Median	.73	.835	.945

These medians indicate that in amount of error from the correct position, the blind boys stood the best, the blind girls next best,

and the seeing girls poorest. In only one position—at 2 o'clock—did the amount of error for the boys rise above an average of one point; the blind girls had similar difficulty at 2, 1 and 10 o'clock; the seeing girls had difficulty at 1, 12, 11 and 10 o'clock, and showed the remarkably poor score of 2.11 at 6 o'clock where the boys made their fewest errors and the blind girls did very well.

Comparing Table II with Table I, we note that at 6 o'clock the blind boys and girls have a very high percent of correct responses and an average or low error score, while the seeing girls have an average percent of correct responses and a very high error score. At 12 o'clock where the seeing girls have their best success in terms of percent of correct response, both the blind girls and the blind boys do better, and in amount of error the blind groups both do better than the seeing. At 3 and 9 o'clock, positions directly opposite the two ears, the seeing girls are slightly higher in percent of correct response and slightly lower in amount of error. In general the blind boys did slightly better than the blind girls, both in percent of correct response and amount of error, but the curves for the two sex groups followed a similar path from position to position.

A further study was made to see whether amount of vision or of intelligence made any marked difference in sound localization. Neither factor seems to have produced any significant change in the results, high and low scores being attained by pupils of all levels of intelligence, whether totally blind or with partial vision. As only 12 of the boys and 12 of the blind girls had I.Q.'s of college level, one might suppose that the college group as a whole would have an advantage. But apparently success in this test is not dependent upon the degree of intelligence.

We have then a fairly clear case of sensory compensation in the superior localization of sounds by blind students, and it seems reasonable to assume that this superiority is the result of practice motivated by an every day practical need. In making their way about alone, whether in buildings or out in the open, blind people find their ears their chief guide, and since slight differences in sound may indicate the need for great and vital differences in their actions, constant vigilance and active attention to sounds is imperative. With practice, discrimination becomes more reliable and responses are made on the basis of cues so slight that they may not rise to the level of full consciousness.

We should have been glad to collect introspective evidence concerning the cues which were most helpful in localizing the sounds in these experiments, but untrained subjects are generally unable to give reliable reports of their mental processes, and a considerable number of our subjects were too young to train. Fortunately psychologists working with more mature subjects have long been interested in determining the means by which sounds are located, so we may perhaps assume that these factors were operative with our blind subjects, and that they had learned to take advantage of them in their daily orientation to objects and in the avoidance of obstacles in their path.

Psychologists teach that just as the visual perception of the position of objects in space depends upon the cooperation of the two eyes, each of which offers a somewhat different picture, so the localization of sounds depends upon the cooperation of the two ears, the accuracy of localization being a function of the binaural ratio, i.e., the difference in the character of the stimulation coming to the two ears. When the source of sound is directly in front of or directly behind the head, both ears would be stimulated equally and a large percent of error would be expected. But when the source of sound is nearer to one ear than to the other, there are five factors which may furnish cues for localization. Obviously, in the ear nearer to the source, the sound

would be more intense; it would reach this ear somewhat sooner, and the sound might arrive in a different phase, at condensation or rarefication; apparently the complexity of a sound varies with nearness to the source, and some people think that the angle of incidence may produce important variations. The effectiveness of these factors may be experimentally demonstrated by isolating one at a time and varying it. By plugging one ear the intensity or complexity of tones may be diminished to any desired amount; sounds equally distant from the two ears are then judged to be nearer to the unplugged ear. The same mistake is found in people whose hearing in one ear has been partially lost. By means of tubes of different length, sounds from a single source may be brought to the two ears in different phase or at different times, and again mistakes result according to the factor which is altered. The most striking proof of the binaural function of the two ears is obtained by the use of the "pseudophone," an apparatus so constructed that the sounds coming to each ear are carried over to the opposite ear by tubes curved over the head and entering the ears, which are closed except for small holes admitting these tubes. This apparatus produces a complete reversal of sounds, those coming from the right being judged at the left and those from the left being judged at the right.

From the data at our disposal it is, of course, impossible to determine which of these factors have been used by our blind subjects in building up their superior powers of sound localization. The seeing subjects had their greatest difficulty, as expected, when the sounds came from points equally distant from the two ears, for at 12 and at 6 o'clock none of the binaural factors were operating, and reversals from front to back or vice versa enlarged the error score. That the blind subjects should get their best scores at these hardest spots is very much of a puzzle. If the blind were consistently better, regardless of the source of sound, one might assume that the precautions for disguising the movements of the experimenter had not been successful and that secondary factors had helped the blind. But they do not show such superiority at the other positions, where the same cues would have been equally operative. The only solution that presents itself is this. Our blind subjects have learned to make such fine sound discriminations of some sort or other that only sounds that affect both ears in exactly the same way are located at 6 and 12. This would give a relatively high percent of correct responses at 6 and 12. Then their attention to the very slight differences in sounds from in front or behind might save them from the errors of complete reversal so common with the less practiced seeing, whose high error scores are largely a result of these complete reversals, each counting 6 points against them. An inspection of the records bears out this assumption, for among the blind boys and girls we find only one complete reversal at 6 o'clock, and only five at 12 o'clock, while among the 60 seeing girls there were fourteen complete reversals at 6 o'clock and six at 12 o'clock.

Having denied superior general sensory acuity as an invariable compensation for the loss of vision, the scientist is very glad to acknowledge its presence when proved, especially when it appears in an activity like the localization of sound, which is obviously useful and therefore probably much practiced. And the fact that the blind boys do better than the blind girls tends further to support the thesis, for their more active life and greater freedom give occasion for more extended practice in the function. The fact that we cannot at present put a finger on the specific factors involved in successful localization of sounds from the very positions which are most difficult for the seeing, leaves something about which the scientist, as well as the general public, may continue to wonder.

DOCTOR ALLEN SAYS:

"NO PROFIT GROWS WHERE IS NO PLEASURE TA'EN."

—*The Taming of the Shrew.*

Several old Royal Normal College pupils have repeatedly told me of the enduring satisfaction which our single year's course in English literature, pursued together nearly fifty years ago, had been to them. Only last summer one of these old boys dwelt warmly upon the matter, saying, "You made me *love* Addison." Naturally we reminisced; and what is here set down is the gist of our talk.

We Norwood teachers were assigned subjects that we could treat *con amore.* I had never taught literature but, with Blaisdell's *Outlines in English Classics* as guide, started in, first reading aloud Longfellow's *The Norman Baron;* then, after explaining in detail its meaning and having the boys retell the story in writing I reread the poem feelingly, in order to bring out with the living voice all that it meant to me. After about twelve hours of such introduction we began the course which was to aim at developing the love and appreciation of literature through the intimate, sympathetic study of a few representative authors.

Eight boys of high school age made up the class, all bright and the more eager because that year was to be their last before specializing in music and tuning. We sat together about our usual table, and so began in full rapport. As there were no embossed texts, the teaching was necessarily oral.

The Deserted Village had been one of the poems examined. Perceiving with delight that the boys wanted further acquaintance with Goldsmith, I read aloud his short biography in the *English Men of Letters* series. After visiting, among other shrines in London, his rooms and gravestone at the Temple and his monument in Westminster Abbey, I described them all. We studied *The Traveller* and we revelled in *She Stoops to Conquer,* a play I had once acted in. Meanwhile my evening reading to the whole school was *The Vicar of Wakefield.* Since Addison and Macaulay were to be likewise absorbed, we did not fail to read Macaulay's essays on Goldsmith and Addison, to dip deeply into *The Spectator* papers and even to learn by heart parts of the *Lays of Ancient Rome.*

These three authors had been chosen as being favorites of my own and we had given two months to each. Then, since the class wanted to finish the year with Shelley, I rather reluctantly consented to do so. We gave him similar intensive study. Nevertheless, the pupil who showed last summer how intimately he recalled the course itself, even remembering who wrote the three essays used from *English Men of Letters,* and repeating parts of the inscription on Addison's monument—this pupil actually forgot that we had included Shelley. Evidently my handling of this poet had been uninspirational and perfunctory.

Some years ago I was taken into the English literature class of one of our college preparatory schools. The topic happened to be Whittier. His English was analyzed and his writings so criticized that all which those impoverished boys are likely to recall of him is that, while once popular in New England, he was "no great shakes." My own boy, who is a victim of such destructive teaching, flays it as far worse than omitting the subject altogether. I can but rejoice that Blaisdell's little book saved me from "the system."

Since beauty is lasting only to those who have it planted in their hearts, should not school children, blind ones in particular, be taught to heed Ruskin's advice—"Make yourselves nests of pleasant thoughts"?

AN EXPERIMENT IN TEACHING ASTRONOMY

Jessica Langworthy

There is at present a tendency for educators to advocate very literal and practical teaching for children without sight, on the principle that a congenitally blind child can really comprehend only the things brought within the realm of his touch and hearing. Instead of trying to force him into our world, we should allow him to develop in his own different world, using the media of his remaining senses. If we oblige him to use ideas and words which need vision for real understanding, it is said, we are making of him a "verbalist," he is using words as mere counters, and is copying the speech of the seeing world.

On the whole, this reaction is sound and the advice is needed, for it serves to call our attention to the fact that in truth we err in this respect, and our teaching often does not convey the meaning we expected it to carry. I discovered this years ago to my chagrin. It is true that the blind child's world is a different world based on the evidence of four senses rather than on the traditional five, and teachers have been far too likely to forget or ignore it.

Once when an instructor of experience was asked what differences she found between blind and seeing children, she replied, "Beyond the fact of physical blindness, I have never noticed any." Either she had known very few seeing children, or she had chosen to ignore the differences. She must have known they existed. Such teachers have not attained to the quality which Professor George Herbert Palmer in his beautiful essay, *The Ideal Teacher,* calls vicariousness. That is, they have failed to think themselves into the blind child's world, know things as he knows them, and then teach from his point of view. They will probably never do this perfectly, for there is a line which teacher and taught are never able to cross, but by patience and ingenuity they can come close together. No teacher without the gift of imagination should attempt to teach blind children.

Granting the contention of the literalist, however, I wish to make a plea for teaching things which stretch the imagination, and which though out of the reach of experience broaden the mental view and add the pleasure of knowing *about* things of the seeing world, even though they cannot be fully comprehended by four senses. Is it not true that among seeing people many things are good to know on the authority of others, just as information, even though we cannot experience them? Much of our knowledge is of this hearsay sort. Because of this fact do we wish to be deprived of it? Is it right to neglect to make a blind child informed, let us say, on facts of light and color, just because he cannot experience these phenomena and will be something of a verbalist in his conversation about them? Through his imaginative powers he takes great pleasure in such knowledge and it adds immeasurably to the normality of his contacts with his seeing friends.

Beside these matters which we seeing people believe on hearsay evidence, there are also thousands of things in this wondrous universe of ours which we only apprehend and can never fully comprehend. We call in the powers of our imagination to give us an intelligent approach to them. With the same thought in mind, I believe there are many subjects which the imaginative teacher can present to her blind children, for the sake of information and culture, which will be based for them on authority, to be sure, and will doubtless be apprehended rather than comprehended, but which are worth while for the pleasure they give and the interest they arouse. The pupils are not making a deceptive use of words when they express themselves about this information, any more than we often do ourselves. Are we not all more or less guilty of verbalism?

While I was a teacher of English at Perkins Institution, I made an experiment which opened my eyes to the worth of informational knowledge of things beyond the experience of our pupils, and which, it has been suggested to me, may interest other teachers.

Our Principal found his boys sadly lacking in the knowledge of many things, practical and scientific, much discussed in the world about them, and suggested that we introduce into our curricula brief courses so that they might have correct ideas about many things of which they were constantly hearing, but on which they had little opportunity to become rightly informed. This seemed to me a chance to give a little time to astronomy—a subject always very fascinating to me and constantly referred to in prose and poetry, but of which our boys had only the dimmest ideas. It was obviously impossible, even though it had been so desired, to take up the subject formally or in detail in the time assigned, twelve lessons, but at least they could learn a few interesting general facts and stretch their thinking to a faint conception of the vast universe.

After recalling previous knowledge and reading several astronomies, both detailed and popular, I put together a set of notes which could be given to a class of high school boys in about twelve lessons, descriptive of the most thrilling and useful facts in the wonderful subject. These notes covered the story of the solar system—the sun as a star, with its family of planets, their motions, distances, sizes, satellites; the earth as a planet, its moon, the phenomenon known as the "Harvest Moon," the tides, the history of the calendar; the principal constellations, and some of the most famous stars; the nature of meteors, comets and other wonderful things. I made some simple diagrams with a marking wheel, illustrating the motions of the planets and satellites, the positions of the stars as we see them in some of the best known constellations, but for the most part I depended on verbal illustrations and descriptions to awaken the imaginations of the pupils—a task that did not prove as difficult as I had feared.

The members of the class assisted in explaining what was difficult to understand by their interested questions and suggestions. In fact, I have often found help in this way in other classes. One boy, perhaps a little more imaginative than the rest, will catch the teacher's idea and re-word the statement in such a way as to appeal to his comrades. Since he understands the difficulties and has caught the teacher's idea, he can act as intermediary for the others.

To aid in giving them concrete conceptions of the magnificent distances under consideration, the pupils worked out a few simple problems, some of which they suggested themselves, such as, "How long would it take you to reach the moon, if you were traveling on an express train which could go sixty miles an hour without stopping until it reached its destination?" They worked out similar problems with regard to the planets and were greatly taken with a simple diagram showing that with increasing distance from the sun, the encircling orbits of the planets greatly increased in size, so that as one of the boys remarked, if one lived on Uranus, he would not have a chance to celebrate his birthday more than once in a lifetime. The finding of the planet, Neptune, by the calculations of the mathematicians before the telescope discovered it gave them all a greater respect for the possibilities of mathematics.

They could hardly hear enough of facts about the sun. We approached a realization of the size of that orb, by imagining the earth placed at its center, and then discovered that the moon could circle round its parent body only half way to the surface, or, in other words, the radius of the sun was something like twice the distance of the moon from the earth. When speaking of "light-years" the boys who liked to juggle with figures immediately proposed to find out how far in miles light would travel in a year, but when the results ran up into tril-

lions, they gave it up and concluded that it was beyond comprehension. Stories about the well-known stars and the constellations as they appear to us were intriguing. Diagrams helped out here. When one morning in prayers, Dr. Edward E. Allen, at that time our Superintendent, read passages from the Bible referring to Arcturus, the Pleiades, and Orion, the boys were delighted because they understood the reference.

When conducting the class, we usually spent a short time in review in order to clear up difficulties and misapprehensions, and gave the rest of the hour to explaining and talking over the new lesson, giving time for the class to write down only large numbers or other facts which needed to be accurately committed to memory. For the most part, the boys were required to depend upon their memories, using their scanty notes as "pegs" on which to hang the rest of their knowledge. Their interest enabled them to do this. I gave no assignments for reading, though there were two braille copies of an astronomy available in the library, which they used to a considerable extent for outside reading. They were too detailed for use in a class so limited in time.

At the end of the brief course of twelve lessons, each pupil wrote an essay covering the subjects treated, and I found to my great satisfaction that the boys had attained the object in view—the acquirement of correct knowledge of a few of the main facts of the universe, as well as a modest realization that they were only on the fringe of a great subject, and that they had not studied astronomy, but had only learned how great and wonderful the universe is. From the start the class was most enthusiastic, and regretted that the time was so short for treating so vast a theme. It seemed to fill a gap in their lives and they all wanted to know more about it than I had time to give them. During a session one day, a boy remarked, "I was glad yesterday that I was studying about the stars, for the teachers were talking at dinner about the constellations they had seen the night before and I realized what they were talking about."

Judging from the interest these boys took in astronomy, I should like to see a further experiment made in giving short informational courses on subjects usually considered beyond our pupils' ken, whether scientific or otherwise. There is not much laboratory work that blind boys can do unassisted, and certainly they cannot wander over a campus making first-hand observations on the heavens. The mathematics of such a subject as astronomy is also beyond them, but why should they be cut off from a knowledge of such things? They certainly take pleasure in them, and if, as in the described experiment, they can be made to realize how limited their work has been, such study adds greatly to their general knowledge. I thoroughly believe that all of us would do well to gain appreciations of much in science, art, and literature, in order to add to our breadth of culture, even though we realize that our knowledge is slight and we could not pass a test before an examiner.

A few quotations from our pupils' papers may serve to show the quality of their interest. "I feel as if I had lost something in not being able to study the subject more thoroughly. . . We have not gone into the details of astronomy, but we have gone over a few things which are always spoken about. . . . When we study astronomy, we find out what insignificant creatures we are; it makes us appreciate more the greatness of Him who created it all."

Astronomy kindles the imagination and the reasoning powers; these pupils will never read about "light-years" nor hear of the magnificence of Betelgeuse, Sirius, Orion, and the Great Bear without harking back to their brief excursion into stellar space. Moreover, the thoughtful and believing teacher will find many opportunities, without preaching, of inculcating those feelings of love and reverence towards the Author of all good, without which no one can reach complete manhood or womanhood.

DEVELOPING A SPELLING CONSCIENCE

Margaret E. Martin, Ph. D.

If nurture in the learning process is sound, the spelling conscience will be developed.—Professor Charles E. Rugh.

Blind children are frequently found not to be good spellers. There are several evident reasons which account for this condition in blind children more than in seeing children. They do not have the opportunity of seeing words written, such as occur in advertisements, current periodicals, on posters, signboards, etc., by which means seeing children more or less unconsciously absorb a great deal of spelling. Many children in the junior and senior high school enter these more advanced grades from the public schools where they have received little training other than by oral methods; hence both reading and writing have been neglected. Furthermore, many students do not master braille as a tool subject readily enough to read with facility; therefore, their reading is not sufficiently extensive to increase their ability to spell. Again, like many seeing children, some blind children read mechanically and never observe the spelling of words; or they read just for the story and become so absorbed that they derive little other benefit.

Taking these difficulties into account, what is the teacher to do? If she is a progressive teacher, she will know that conducting a formal spelling class at stated intervals will not solve the problem. She must first instil in her pupils "the will to learn" to spell. Then only will they be ready for the application of the methods of teaching spelling. The blind student has to realize that he must carry his own dictionary mentally. He has no ready access to authorities on word forms. He must, therefore, be much better trained than the child with normal vision regarding orthographical correctness.

From the standpoint of the psychology of learning it is interesting to note some of the ways by which blind children visualize words. Some children see the words as a whole as they exist in braille; others see them in their component parts, i. e., the separate letters; others see them as they exist on the printed page, which is the case with some students who formerly had their sight; others see them as they would write them on the typewriter; and still others visualize words as pictures.

To return to the need of developing a spelling conscience. Blind children are more apt to be amenable, and even docile to the point of being passive, than the more active seeing children. The teacher's problem is thus to stir rather than to curb her pupils. The personality of the teacher is particularly reflected in her blind students. She must always be on her guard that her interest does not diminish nor lag. When a teacher has been able to convince her students that her subject is worth while, then half the battle is won. Children have a sense of values that is too often disregarded. Much of the trouble that has arisen in the past in the learning or rather teaching process has been due to the fact that those in authority have arbitrarily tried to superimpose their own ideas on unwilling victims.

Children usually realize whether or not they can spell. Often they are anxious to make improvement and are at a loss how to begin. Their hopelessness is intensified when they not only feel their own incapacity to find a way to improve but have no assurance that the teacher can help them. They see little aid to their perplexity in learning a stated number of words periodically that has no particular connection with their daily activities. What does it mean to a child to hear that he is about to learn to spell the hundred most commonly misspelled words? He would see much more value in a list of a hundred words that he has misspelled.

How is a child to be made to wish to spell

correctly? The answer is simple. He can't be *made*. He can't be made to do anything unless he wills to do so. But a desire can be created within the child to will to spell better. There is no cut-and-dried way to accomplish this. Individual differences in children are too great for "a way." A teacher's ingenuity will be called upon to bring about this will to spell correctly. She must create adequate incentives.

Sometimes it is a matter of a child's pride that must be touched, and again it is a child's sense of values. The important task is to find the correct stimulus. Often a child will suddenly realize that he is a comparatively good speller. He takes pride in this realization and makes an effort to reach a higher level. Again a child is unhappy because he is deficient in spelling and will make every effort to improve. In both of these cases the teacher has a more or less simple task. She may encourage the child to learn a number of new words a day by giving him extra credit for this work. Again she may assign special compositions or exercises for the child to write, employing words that he wants to master. Sometimes it is helpful to stimulate a pride and interest in class progress which may be stressed with that of individual progress.

It has often been said that the spelling lesson should include those words which will meet the student's present and future needs. It seems to the writer that teachers throughout the ages have laid too much stress on the words "future needs" to the sacrifice of "present needs." If the child can be taught the words necessary for his present needs, the future needs will accordingly be met.

With the above theory in mind, a spelling lesson should be based on the activity that the child is at present experiencing. To be more specific, teach the child the words in his history, geography, or English lesson that he is actually working on today. Teach him the meaning of the words and the pronunciation as well as the spelling. There will often be words in a lesson which are beyond the present comprehension of the student. These may be omitted at the discretion of the teacher. Here the judgment of a teacher is called upon to decide what words a child should be taught and those that should be overlooked—at least postponed.

A helpful method is for the teacher to keep an individual list of each pupil's misspelled words no matter where they occur. Then the child should be encouraged to master these words. Here again the child can be stimulated to will to learn the words with which he has had difficulty. Always the word correctly spelled should be imaged by the child. It is a mistake for a teacher to say to a student, "You misspelled judgment by adding an 'e' after 'g'. You should spell judgment without the 'e'." While the child may see the difference now, a week later he won't remember whether the teacher said to add an "e" to judgment or to omit it. If, on the other hand, the teacher gives the pupil only the correct spelling of judgment, he will in time forget his erroneous way of spelling it and carry only the correct form in his mind.

This leads to a discussion of a method of teaching spelling that seems to be prevalent in many schools today. It is the writer's belief that such a method is certain to develop poor spelling. Some teachers advocate teaching children to spell only the words they do not know. They ask, "Why waste time having students study words they already know?" At first thought this seems sensible. A bit of concentration on the idea will show that the desired effect is not produced. If a child is allowed to misspell a word, it will take more time for him to correct his wrong concept of the word than if he had first gone over a list of words in which occurred some that he already knew.

If a teacher is going to teach pupils to spell words that are a part of the daily program, she must make out individual lists for each class or group. She cannot turn to spelling books in current use and assign lessons. Short lists of words frequently

dictated to students are more effectively mastered than long lists at greater intervals. Better results are obtained if blind students are required to write their spelling both in braille and in typing.

Rivalry among students and classes in a spelling lesson is an additional incentive for learning to spell. There is a real satisfaction in saying, "I received one hundred in spelling today," or "We have a hundred per cent class in spelling this week."

There is a possibility that research will some day show that synaesthesia may be used as an effective aid in spelling. Although this color-sound association is not characteristic of the blind, a large enough number of blind boys and girls in our schools have been found to be synaesthetic subjects to warrant further investigation of this problem.

Vocabulary building is an integral part of a spelling lesson. In fact, the part it plays is too obvious to necessitate any real discussion. It is sufficient to say that during the spelling lesson the teacher has an excellent opportunity to explain and clarify the meaning of words.

It is a well-known fact that a knowledge of spelling can be gained through reading. When a child has been taught to read intelligently, he unconsciously learns to spell many new words. A blind child who acquires his knowledge of literature by being read to will never learn to spell. Our English language is not phonetic and guessing will not work. Too much stress cannot be laid upon the importance of independent, individual, thoughtful reading in braille by each child for the acquisition of ability in spelling.

Finally, it must be said that to develop a spelling conscience students must "will to learn" to spell, and their standard must be one hundred per cent correctness. Although spelling is primarily a matter of habit formation in which accuracy is essential, there are likewise involved such vital accomplishments as: vocabulary building, a nice discrimination in the use of words, and correct pronunciation.

EXCEPTIONAL CHILDREN

Kathryn E. Maxfield

Last November at the invitation of the Office of Education, United States Department of the Interior, fifteen people representing all types of exceptional children met in Washington to discuss ways of developing more effective cooperation, not only between the organizations and the Office of Education but between the agencies themselves. In calling this conference, the Office of Education was taking an initial step toward acting upon a recommendation made four years before by the White House Conference on Child Health and Protection that a national advisory council be appointed "to advise in the formulation of, and assist in sponsoring a comprehensive educational program" in the interest of exceptional children. The groups of children considered as exceptional are (1) the deaf and hard of hearing, (2) the blind and partially seeing, (3) the crippled, (4) the speech defectives, (5) the children of lowered vitality, (6) the gifted, (7) the mentally retarded, and (8) the emotionally and socially maladjusted.

There are certain activities which all conferees recognized as being especially important. Everyone felt the need for an adequate census, or survey, which would indicate more clearly the extent and character of the problems to be found in the care and training of exceptional children. It was recognized also, that work for all exceptional children would profit by the establishment of a common philosophy of special education which would take into consideration the whole child and the needs common to all children.

All the conferees expressed the belief that further opportunities for discussing the problems common to all groups of exceptional children should be made possible. Mrs. Franklin D. Roosevelt at one session brought out the fact that the cost of laissez faire, where handicapped children were concerned, was more expensive to society than was adequate education for them.

THE TEACHERS FORUM
for
Instructors of Blind Children

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QUALIFICATIONS OF TEACHERS IN SCHOOLS FOR THE BLIND

Schools for the blind and the deaf are generally considered charitable rather than educational institutions. In many—perhas in the majority—of our states, they are still legally classified as *charitable institutions* in spite of the slow but sure trend toward legal recognition as *schools*. Educationally progressive states designate them as special schools, and all educators of blind youth insist upon this classification. In a few states, among them Pennsylvania, credit toward permanent teaching certificates is granted.

Accepting this classification, what teacher qualifications should be exacted? In schools for the blind, teachers are confronted with all the problems of teachers of seeing pupils —varying degrees of interest, ability, physical endowment, "over-ageness," home conditions—all complicated by such vital factors as cause of blindness, varying degrees of vision within the generally accepted definition of blindness, age at loss of vision, and lowered vitality. Teachers of children without sight, therefore, should have all the qualifications of character, training, and experience that are required of public school teachers in a progressive school system, supplemented by specific training for our specialized form of education.

Within recent years in educationally progressive states, state normal schools have been converted into colleges, with graduation from an approved high school as a condition for admission and the satisfactory completion of a four-year course leading to the degree of Bachelor in Education as a prerequisite for teaching in any school in the state. At the earliest practicable date, these qualifications should be required of all teachers in schools for the blind, with reasonable exceptions for teachers of music, and the manual arts. In addition, a year's special training such as is now provided at Perkins should be mandatory.

In the Philadelphia schools, "the requirements for appointment to the position of special class teacher shall include completion of at least three years of approved post-high school training, two years of approved teaching experience, and twenty semester hours of approved preparation in the field." In his paper on the certification of teachers in schools for the blind, at the St. Louis A. A. I. B. convention in June, Dr. P. C. Potts indicated clearly in the requirements for his "A" certificate what should be our ultimate goal—a goal that should be attained within five years: "A degree from a standard four-year normal school or college, with at least 30 hours of education or psychology, including courses in principles of education, educational psychology, psychology of special subjects, education of exceptional children, history of education, and educational tests and measurements."

Many teachers in our schools—residential and day schools alike—are graduates of normal schools or have degrees from approved colleges, but it is probably true that the majority of the college-trained have not had courses in education elected with a view to preparation for teaching, and probably ninety-nine percent of all our teachers have undertaken the work with no specialized training.

Some superintendents of schools for the blind do not consider specific training for

teaching the sightless pupils necessary. "A good resourceful teacher," they say, "will quickly learn the technique in the class room and will soon be doing excellent teaching." To a degree this is true, as experience has proved. But each new teacher gains experience at the expense of his pupils. Unquestionably many mistakes could be avoided and much valuable time saved if the new teacher had learned something about blind people and approved methods of instructing them before beginning her work. Teaching is now becoming a profession in this country but teaching blind pupils is still a long way from the goal. And it is deplorable that so many of us are entirely complacent about it!

American educators of the deaf have been developing a teacher training program for years and specific training for teaching in these schools is demanded. As a result, the education of the deaf is a profession and these requirements account in large measure for the higher salaries paid teachers of the deaf.

Experience in teaching seeing children is an extremely valuable qualification for teaching blind pupils. The "two years of approved experience" required of teachers of special classes in Philadelphia should be set as a standard qualification for our teachers. So complicated are the problems involved in teaching those without sight that this minimum requirement is justifiable.

In order to secure teachers possessing the essential qualifications, the same salary schedule that obtains in the public school system must prevail, with a bonus of from $100 to $200 a year—in Philadelphia it is $300. An integral part of the salary schedule of public school teachers is a definite annual increment for satisfactory service; the same procedure should obtain in the salary schedule of a school for the blind. This schedule will justify a requirement that teachers shall continue study and professional growth by utilizing the opportunities provided in summer and evening schools.

After years of agitation thorough and extended courses of training have come to be required by law for the practice of medicine, law and the ministry. And these are now universally recognized as "professions."

The qualifications suggested seem a minimum requirement if we are to realize our ideal that teaching those handicapped by blindness shall become a profession in the United States.

Editor's Note: The above editorial, written by Dr. Olin H. Burritt, Principal of the Pennsylvania Institution for the Instruction of the Blind, is the first of a series to appear in *The Teachers Forum,* and written by leaders in educational work for the blind throughout the United States. Dr. Burritt, whose reputation in work for the blind has long been established, needs no introduction to *Forum* readers.

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The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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A SURVEY OF TYPING DEPARTMENTS IN STATE SCHOOLS FOR THE BLIND

Carl Engler

One of the problems in teaching academic courses to the blind is that of keeping braille textbooks and print texts properly correlated. It is a simple matter to revise a print book, but the cost of keeping a braille text revised is considerably higher. As a result, the print texts are usually much more up to date than the corresponding braille texts and much confusion results in trying to use both texts in the same class. This condition results in making classroom procedure annoying to the teacher but the real tragedy falls on the blind pupils, who are severely retarded because of the dissimilarity.

The writer has been the commercial teacher at the Wisconsin School for the Blind at Janesville since 1926. The problem of teaching from textbooks in this department is even more acute than in some of the other academic subjects. Most print texts, from which the braille texts are selected, are written for pupils of at least the high school level and consequently the material is entirely too difficult for blind pupils who learn typewriting as low as the fourth grade in many state schools throughout the United States. The words in the lessons are, in most cases, too difficult in spelling, meaning, and pronunciation to be of much value to young blind typists. Because of the entirely different objective of a course in typing in schools for the blind, where the *chief* aim is to teach the child to learn to write friendly letters, tests, and schoolwork rather than anything of a commercial nature except in rare cases, much of the material in most of the texts is entirely unsuited and unnecessary. It seems to be quite generally agreed that, after the first year, at least three-fourths of the material presented to blind pupils must be done by the teacher by the dictation method from her own sources of supply. It would be utterly impossible to develop a course of typing for the blind where all the material to be used could be put into one or even several volumes. If bulkiness alone were the chief objection, this difficulty might be surmounted, but the cost of such a volume in braille would be too high to warrant the effort, especially in so limited a field. Therefore, the conclusion seems to be that the teacher must have at her command a generous supply of material from which she can draw whatever she wishes to present in whatever manner and style she thinks best for her individual group. However, the first year of typing opens a field where much can be done to alleviate present conditions. Whether one learns typing at the age of twelve or twenty, the fundamentals and the technique are the same and for that reason the field of developing a course of typing more suitable to schools for the blind than anything on the market at present is wide open to experiment, investigation, and recommendation.

Motivated by a desire to improve his own department and being eager to know what other schools are doing, the writer made a survey of all state schools for the blind. Letters were sent to all state schools for the blind in the United States listed in the *Directory of Activities for the Blind in the United States and Canada,* published by the American Foundation for the Blind. The first interesting fact gained from this survey was that eight states had no state schools listed. Four states failed to answer the questionnaire although two letters were sent to all states not answering within a reasonable period of time. Therefore, thirty-six states answered the questionnaire and on the basis of their answers this summary is presented in the hope that it may be of genuine interest and help and possibly stimulate an activity toward reorganization of typing courses which the writer feels is so necessary in the first year of typing.

The number of pupils taking typing varies from as low as five to as high as 70, with the median and the average both being 32. This does not include those who have completed the course and are using the typewriter daily in schoolwork. Percentages of number of pupils taking typing or who have had typing to the total enrollment cannot be given because many of the answers did not give this information.

There is a wide divergence in the number of classes of typing. The lowest is a division into only two groups, beginning and advanced. The next includes three classes: beginning, advanced, and dictaphone. One variation of this group was found as follows: Typing I, II, and advanced. Several schools had four classes: Typing I, II, III and advanced. The final grouping had five classes: Typing I, II, III, IV, and advanced or senior. One school, in the final class, prepares pupils for the State Regents Examination. Several instances of a special group were found where the course was adapted to those of unusual ability with enough sight to fill secretarial positions as well as to those who were handicapped so as to be unable to keep up with a regular class but who wished to learn enough typing for their own particular needs.

The grades at which typing is first taught represents an interesting variation. Two schools start as low as the fourth grade, eleven in the fifth, eleven in the sixth, six in the seventh, two in the eighth, and one in the ninth. One school starts typing in both the fourth and fifth grades as conditions warrant; another in the fifth and sixth; and one school starts the boys in the eighth and the girls in the ninth. In the latter school, the pupils must be able to write legibly with pencil before they may take typing. One school considers it "a great waste of time, expensive, and burdensome to have pupils under the eighth grade fool with typewriters." Two schools listed a lack of space and equipment as reasons for the low number of classes and the small number of pupils in the department.

The number of periods in which typing is taught varied from two periods a week to one period a day, five days a week. The length of the periods varied from twenty-five minutes to fifty minutes with the majority at thirty-five minutes. The size of the classes and the number of grades taught easily accounts for the wide divergence here.

A total of thirty-nine different textbooks or sources of material was listed. One text was listed by twelve schools, one by eight, two by seven, and two by five. The number of texts used by individual schools varied from as low as only one in many cases to as high as ten in two cases. Many of the schools had from two to five different texts which would seem to indicate that the idea of a teacher having as many different texts as possible from which to draw material is already being applied.

The real issue of the survey centered around the following question: Do you feel that a more suitable text, adaptable to schools for the blind only, could be developed or must each teacher work out her individual solution? The writer was more than gratified with the responses because seventeen states were emphatic in their statements that a new text could and should be developed while nineteen felt that the teacher must work out her own solution with the material at hand. Three of the nineteen, however, compromised by saying that at the present time the teacher would have to use the material she has but that there was a definite need for more suitable material which might be supplied in the future.

One of the texts in use in the writer's department is the one listed by eleven other schools. The first twenty-one lessons of this text form the basis for the teaching of typing in the first year. When these lessons are completed, the teacher is compelled to resort to other books for material, particularly readers which apply to the particular age limit of the typing class. This is due to the material in the regular text being too difficult for fifth-grade pupils to understand and unless the pupil knows and understands

the words he is writing the practice becomes merely mechanical and loses its effectiveness. The following sentences, selected from this text, illustrate this point: "The native dress of her people is quaint and picturesque. They are of small but strong physique. Have you seen the exquisite bloom of the phlox? Will the tourist explore the Zuyder Zee?" Many of these words mean nothing to a fifth-grade pupil; they are just so many letters that must be laboriously read one by one with the fingers and then just as laboriously hunted out on the keyboard. Rhythm and accuracy, the very fundamentals of typing, are destroyed and consequently, without either of these, speed just isn't developed. The material should mean something to the pupil and he should be able to understand what he is writing. He should be able to read a sentence and then transcribe it on the typewriter without taxing his memory or destroying his rhythm and accuracy by several references to the braille original. Here is where there is a definite field for reorganization of the material. It must be arranged and selected for the age at which it is being taught.

One school answered as follows: "A standardized course of typing for the blind would be a calamity." There are standardized courses for other subjects which form the basis of all instruction. There is no calamity, necessarily. The manner of presentation is up to the individual teacher; the text merely supplies the material. The mechanics of typing are the same, be the pupil in the fifth grade or in the third year of a university, but the type of material would be entirely different.

The scope of the course after the first year will vary greatly. Should exercises be given in tabulation, statistical recordings, designing, billing, letters of application, of salesmanship, of collection, etc., which the blind pupil may never use, or should he be given some of each to show what can be done on the typewriter and to give him a smattering of each? That is up to the individual teacher; she will find plenty of this kind of material available in most of the present texts. But nowhere, at the present time, is there available for her a text that presents the elements of typing in such form as is readily understood by a fifth-or sixth-grade pupil. There are no little stories such as children of that age like to hear because they are interested in that type of material. There are no simple, friendly, gossipy letters such as a fifth-grade pupil might write. There are no exercises on how properly to write tests and how to prepare daily written lessons on the typewriter. The teacher must of necessity have at her command many varieties of texts covering all these subjects from which to get material to present to her class and in so doing the blind pupils lose the benefit attained from being able to read over a lesson. A course such as this, developed with the blind child in mind, would give the proper material for the teacher's use, either as regular assignments or as a source of study for the blind child, and the child would have material that he could easily understand. Spelling, punctuation, and grammar form the basis of correct typing; and unless the blind child is given material that he can handle, he is not learning any of these three fundamentals of typing and consequently his typing will be a mere mechanical process.

A closely related topic is recommended to anyone having the interest and desire to carry on a survey similar to this: How much is the blind pupil retarded in his thinking process by the constant clatter and noise of the machines? True, he sets up a defense mechanism to some extent, but the noise must present some difficulty which can never be overcome. Noiseless typewriters are on the market but their cost is enough to keep them out of the average school for the blind, at least in sufficient number to warrant an experiment with their use.

In conclusion, the writer wishes to thank all contributing states for their kindness in giving him material to offer for the benefit of all interested parties. All facts presented

(*Continued on Page* 74)

DOCTOR ALLEN SAYS:

WHAT IS THE HARVARD COURSE?

Some course on the education of the blind was foreshadowed in the 1880's when Mr. Anagnos began assembling at South Boston his special Reference Library. In Philadelphia I started a similar collection which, in 1902, at Overbrook, became the basis of our bi-monthly teachers' meetings for the historical study of our field.

As soon as the Perkins collection had been accessibly housed at Watertown, I cast about for some way of making it a living thing, and first considered a normal course. But on noting that Harvard University recognized in its educational psychology group a course in the study of mentally deficient children, Director Hayes of the State Division and I offered Harvard to carry on a course in our specialty without cost to the University. Thus began in 1920 a series of extension lectures on the education of the blind, given at Cambridge and sponsored by the Graduate School of Education. Over sixty students immediately enrolled, mostly from the State Division and Perkins staffs.

The story of this enterprise and its change of status to that of a regular offering toward the Harvard Ed. M. and Ed. D. has often been told. Suffice it to acknowledge here that obviously the material, personal equipment, and hospitality of Perkins Institution have been alike invaluable and necessary in order to have students for such a course and to continue it. Even so, its real importance lies in its connection with Harvard.

For some years the lectures were given at Cambridge. But when it appeared that all the students would live at Perkins, most of the lectures were given at Watertown. Similarly much of this Harvard School's study of the feeble-minded has been done at the institution for them in Waverley; and some of it by "specials," that is, students not having graduate standing. The policy of our liberal University being to promote education in general, it was voted in 1924 to add to the existing courses a new group called N, "Special Phases and Fields of Education" in which the course on the education of the blind became the first offering; also to permit special students to enjoy its privileges without expectation of receiving Harvard credit.

In order to accommodate students who might wish individual instruction, field work, or research in the education of the blind, N101-2 was created. (101 means first semester; 102, second.) "Enrollment in courses numbered 101-2 requires the special consent of the instructor, and these courses carry only such credit as the Administrative Board, on the recommendation of the instructor, may approve."

I am annually appointed instructor of N1 and N101-2 by the Corporation of the University, with the title of Lecturer.

The course in Special Methods, begun in 1924-25 under Miss Jessica Langworthy, (A. B., Smith; Ed. M., Harvard,) is usually taken immediately after N1 and may be counted as part of N102 by exceptional students who fully quality for it. Several of our students have so counted it and a few, who have taken enough additional courses at Harvard—16 half-courses being required—have received its Ed. M.

N1, being historical and inspirational, gives the foundation; the course in special methods crowns this with the theory and practice of teaching the blind. The full academic year of such study and experience, while in residence among blind youth and their teachers in a family boarding school conducted in the spirit of mutual service, becomes a singularly intensive preparation for our field of work. Indeed, Perkins has contributed nothing more constructive since its removal to Watertown. But, again, the great importance of it is that it is a course in the Graduate School of Education of Harvard University.

THE PHILOSOPHY OF AN ACTIVITY PROGRAM FOR BLIND CHILDREN

Ralph Vickers Merry, Ed. D.

In 1900 John Dewey propounded his new philosophy of education which attracted little general attention at the time. It has required more than thirty years for his ideas to exert an appreciable influence upon American educational practice, but today an increasing number of progressive educators are reorganizing their curricula in accordance with Dewey's principles.

Stated briefly, Dewey's philosophy holds that education is not preparation for future living, but is life itself. Children are not educated by memorizing facts which have no intrinsic interest for them but, rather, by participating in real, meaningful experiences which have a genuine appeal. "Learning by doing" rather than learning by rote epitomizes this educational philosophy.

Translated into actual school practice, these principles become the "project method" and "activity program" of the modern progressive school. It matters little which of these terms is employed, although the phrase "activity program" perhaps expresses more adequately what is embodied in a new type of curriculum. In an activity program the children engage in various individual and group projects chosen and planned by themselves. The teacher acts as a guide and counsellor, but in so far as possible remains in the background. The range of activities is as wide as the range of interests of the children involved, although quite frequently a number of activities may be centered around some major project carried out by the entire group. Any activity is judged worth while if it provides real, first-hand experience, and, by challenging ability, leads to intellectual growth.

Subject matter is introduced in response to the felt needs of the children. For example, if a model village is under construction, problems in arithmetic naturally will arise. If it is a village intended to typify some particular period, history and geography will be studied. In this way subject matter becomes a necessary part of the children's daily experiences, and is not dreaded as something which must be mastered under penalty and which has no connection with life problems.

The foregoing paragraphs have attempted to sketch briefly the philosophy and practice of progressive educators of seeing children. We may now ask: How far have such principles and practices been adopted by educators of blind children, and is it possible or desirable to adopt them in their entirety?

A number of schools for the blind have introduced project work with varying degrees of success. In some instances, however, the term "project" seems to have been interpreted in its more restricted sense. It may be good "object" teaching for a class of blind children to spend certain fixed periods of the day working upon constructional projects planned and directed by the teacher, but it is not a real activity program. This is especially true when the remainder of the school day is occupied with formal instruction in the traditional subjects. If one may judge fairly from the reports issued by schools for the blind, and from articles published on various phases of the education of blind children, it would seem that a more or less formal type of education still exists in most of our residential institutions, although the case may be somewhat different in day school classes.

Let us now consider the question as to the feasibility of reorganizing the curriculum for blind children according to progressive principles. It should be recalled, first, that the chief objective of the activity program is to provide real, first-hand experiences which are meaningful to the children. It is recognized, of course, that vicarious experiences have to be employed, especially at the

more advanced levels of instruction. It would be impractical for every child to study geography through a trip around the world, nor can we turn back the pages of history to enable our pupils to experience Colonial life. Preceding generations have accumulated a tremendous mass of knowledge and experience which must be passed on to the rising generation during the comparatively short period of school attendance. Clearly, it is impossible for the child to repeat all the details of this social heredity, but it *is* possible to provide a basis of first-hand experience upon which vicarious experiences can be built.

Providing meaningful experiences for blind children is a far more difficult task than might ordinarily be supposed. The assumption is erroneous that materials and methods which furnish certain experiences for seeing children will do likewise for blind children simply by being translated into a tactual medium. For example, experiments with embossed pictures, diagrams,[1] and certain types of animal models,[2] show that they give blind children quite different experiences from those afforded seeing children through the visual recognition of pictures and objects. Cutsforth,[3] Steinberg,[4] and others have called attention to the fact that the prevailing system of education for the blind is based largely upon the mastery of verbal knowledge which has no foundation in meaningful experience. Whether or not we agree entirely with this point of view, it seems certain that vicarious experience does play an important role in the curricula of many schools for the blind. Although such vicarious experience is essential in the education of both the seeing and the blind, care should be taken to prevent it from becoming the only type of experience provided for children without sight.

If educators of the blind, therefore, wish to revise their curricula according to our modern educational philosophy, the mere introduction of activities for seeing children, adapted to tactual needs where necessary, will not accomplish the task. Such a procedure may produce the outward semblance of progressive education, but it will not result in the type of intellectual and social growth for which the activity program is designed. The problem is one demanding careful and patient investigation to determine which types of activities are really meaningful to blind children. This is a task calling for years of painstaking research, and although, as in many educational problems, a final solution may never be reached, it is certain that a program can be developed which will give to blind children approximately the same benefits as are derived by seeing children from existing types of activity programs. We must not forget, however, that since the blind child is deprived of a very important sense organ, his methods of acquiring experience are necessarily different from those of the physically normal child. The problem is further complicated when the children in the group are not totally blind, but have varying amounts of vision.

Finally, it should be pointed out that no school for the blind can really adopt progressive methods unless its teaching staff is thoroughly familiar and in sympathy with the philosophy of education outlined in this article, and also expressed fully by Horne,[5] Kilpatrick,[6] Rugg,[7] and others. No matter how enthusiastic the superintendent may be,

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[1] Merry, R. V. and F. K., "The Tactual Recognition of Embossed Pictures by Blind Children," *Journal of Applied Psychology*, XVII, April, 1933, pp. 148-163.

[2] Merry, F. K., "A Study of the Merits of Animal Models Used in Teaching Blind Children," *The Teachers Forum*, II, January, 1930, pp. 12-13.

[3] Cutsforth, Thomas D., *The Blind in School and Society*, D. Appleton and Co., New York, 1933.

[4] Steinberg, W., "The Blind as Personalities" in *Touch Reading of the Blind* by Karl Bürklen (trans. by F. K. Merry) American Foundation for the Blind, Inc., New York, 1932.

[5] Horne, H. H., *The Democratic Philosophy of Education*, Macmillan Co., New York, 1932.

[6] Kilpatrick, W. H., *Foundations of Method*, Macmillan Co., New York, 1925.

[7] Rugg, H., and Shumaker, A., *The Child-Centered School*, World Book Co., Yonkers-on-Hudson, New York, 1928.

and no matter if the changes he proposes are based upon the results of careful research, unless every teacher concerned really understands and believes in the undertaking, it is doomed to failure. It is no wonder, perhaps, that teachers trained under the traditional system of education, and who have taught according to that system for many years, should find it difficult if not impossible to adapt themselves to such radically different methods. A few, perhaps, may be able to change from the old to the new, while others may conform outwardly to a changed program although their teaching still will be formal in character.

In conclusion it may be said that any educator of blind children who wishes to introduce progressive methods into his school should consider at least three main points:

(1) He should understand and thoroughly believe in the application of our modern philosophy of education,

(2) He should realize that such methods cannot simply be transferred from seeing children to blind children but that long and careful investigation must produce a program for the latter, and

(3) He must be supported by a staff of enthusiastic and intelligent teachers who understand what is being attempted and are in complete sympathy with it.

If these three requirements can be met, there seems to be no good reason why the education of blind children cannot benefit from the methods now employed in progressive schools for the seeing.

FOUNDATION LIBRARY

A new edition of the *Handbook for Home Teachers of the Blind* has recently been published by the College and Association of Teachers of the Blind in cooperation with the National Institute for the Blind in London, England. The first edition of this *Handbook* was published to meet the needs for a guide to the examination for home teachers at the College of Teachers of the Blind, and also as a manual for much of the teachers' daily work. The matter contained in the early edition has been revised and brought up to date and several new chapters have been added.

"Detroit's Training Cottage for the Blind" is an article written for the *Junior League Magazine* for January, 1935, by Kathleen O'D. Hoover. The writer concludes her story of the work done in this experimental cottage with the observation "Given a chance, the blind child can prove to the world that blindness is no longer an insurmountable obstacle. Through training—and the opportunity to practice that training—he can be converted from a burden to an asset in the domestic scheme of things, and led into a life which, though forever dark, can be made one of usefulness and progress."

A description of the Arthur Sunshine Home and Nursery School for the Blind at Summit, New Jersey, by Doris Louise Coville, is found in the December, 1934, issue of the *Virginia Guide* under the title "Preschool Training for the Blind Children." The writer defines the objectives and principles of the Home, and describes the activities which are being carried on in order to attain these objectives. Some space is given to a description of the extension service which is now being conducted in connection with the Arthur Sunshine Home.

A new quarterly magazine on work for the blind has recently appeared in Vienna, Austria. *Archiv fur das Blindenwesen und fur die Bildungsarbiet au Sehschuachen.* (Journal on Work for the Blind and Sight-saving Classes.)

Herr Siegfrid Altmann, well known in America for his participation in the World Conference in 1931, is chief editor. Several experts on work for the blind from various countries have promised their collaboration.

There will be articles and important communications in English, French and Italian as well as in German.

HELGA LENDE.

THE WELFARE OF THE VISUALLY HANDICAPPED PRESCHOOL CHILD

Kathryn E. Maxfield

Recently educators of the blind and partially seeing have begun to realize the importance of special attention to the care and training of small children who suffer from severe visual defects. In schools for the blind especially, housemothers, kindergartners, and first grade teachers are realizing that many of the problems with which they have to struggle might have been avoided if their pupils had been given the right preschool training. Moreover, we are all beginning to appreciate the fact, that given the major physical handicap of blindness, other apparently lesser disabilities acquire greater importance in thwarting the individual's social and economic adjustment than does his lack of sight.

Probably the most obvious handicaps are the mannerisms which many blind children acquire when they are under school age yet which they have often not overcome by the time they are fully grown men and women. More than one young man of unusual talent has failed vocationally and socially because of some unpleasant habit he has acquired, such as rolling his eyes or digging his fists into them. To a person who has never seen, such a mannerism as this probably seems no more important than do other automatisms of people who do see—such as scratching one's ear, drawing pictures as one listens, or fussing with one's hair. Therefore, for the blind man, the greatest incentive for the correction of these mannerisms is lacking—that of seeing for himself how very objectionable they must be to other people.

When mannerisms such as these have been acquired after a child is ten or twelve years of age, possibly they are not so difficult to overcome. However, when they have been practiced steadily from the time a child is one or two years of age, each year of practice finds them more firmly ingrained in his nervous system and more completely satisfying to him psychologically.

Unfortunate as these mannerisms are, from the point of view of the social adjustment of the visually handicapped child, there is another still more serious problem. Nothing is much more baffling to a teacher than to be confronted with a blind child of good intelligence whose unresponsiveness to motivations from outside of his own physical self retards his progress through school and makes his mental ability of little value. To see a child who should be romping and playing with others of his own age sitting instead, rocking aimlessly back and forth, day-dreaming and wool-gathering, makes a teacher feel hopeless and helpless. Even when she uses unusual patience and perseverance in trying to awaken such a child's mental life, the improvement is likely to be very slow. Usually such children as these have been blind from birth or from an early age and, through over-solicitude on the part of the parents, have been lovingly prevented from acquiring developmental experience. Apparently, their lack of training at the proper time, when they were physiologically ready to develop new activities, has had an inhibiting effect on their development of interest in the external world. The baby clings to the placid, helpless existence of a three or four month's old infant, and he clings with a determination that is discouraging to those who are trying to make a "real boy" out of him.

Even in blind *babies,* and sometimes in partially seeing ones, this resistance to developing influences outside of themselves is to be found. I have in mind one little girl of twenty-six months, who refused to stand or walk before she was two. Whether anyone tried to train her before she was fourteen months old, I cannot say. At that

age, however, she was unable to support her own head. A few months of patient work on the part of those who were training her were sufficient to get her to sit up. Beyond that stage, however, she has vocally and vigorously opposed every advance. At last, she is beginning to stand without too much contrariness, and she is showing an interest in more constructive toys. Until she was twenty-five months old, she still refused to eat anything which could not be given her in a bottle. Just recently she has condescended to try a spoon. For months, however, her teacher was faced by a complacent little face which plainly showed complete satisfaction with things as they were, that is, with food in a bottle.

Much of the harm done to the personality of a visually handicapped child is the result of misguided devotion on the part of the family who would breathe for him if they could. A surprising amount, however, is done by doctors, psychologists, and other specialists to whom parents have turned for advice, but whose limited experience with the handicapped has made them either under- or overconscious of necessary differences in treatment.

Although those who have given special thought to, and who have had practical experience with, visually handicapped preschool children may feel qualified to say that certain procedures are harmful and that others will not work, they are equally ready to admit an insufficient knowledge of the constructive procedure which should be used in the training of this particular handicapped group. For instance, we know that most blind babies will not walk of their own volition until they are two and even three years old, and when they do walk, they are likely to make a very bad job of it, from the point of view of posture. They need special motivation and guidance from their elders; but how to give these most effectively is not yet well understood.

Much has still to be learned regarding the best method of caring for and training visually handicapped children at this early age level, and for this purpose the Arthur Sunshine Home and Nursery School for the Blind is developing a child study laboratory which will be described at another time. On the basis of what we know now, however, and of what we think we know, we are doing what we can to prepare the children entrusted to our care for entrance into school unhampered by acquired mannerisms, and by mental, emotional, and physical lethargy. We are doing this both in our residential nursery school and through our extension service. Like that of the child study department, however, the work of the residential nursery school will be reserved for discussion at another time.

In our program for promoting the welfare and training of visually handicapped preschool children, we are following a procedure which seems to us the wisest one. First of all, we believe that every child of this group should remain in his own home as long as that home can furnish him with a wholesome, constructive, and stimulating environment. In order that the normal development of these children may be assured, there should be in every locality some well-trained social worker whose first thought and attention can be devoted to them, whether or not she needs to give them her full time. In the training of preschool children in their own homes much of the actual work has to be done with the parents, in order to make them realize the ways in which they are hampering the personality growth of their handicapped child when their intention is to help him. The training of the parents and the children while the latter are still young enough to benefit by it means much for the future happiness and economic independence of blind or partially seeing boys and girls.

If the parents are limited in their ability to master their own emotions so that the child's development continues to be thwarted, then for his sake state or local agencies should do all in their power to place the

child for a few years where his opportunities for development are more certain. If the parents seem unqualified to give adequate care and training, then their handicapped child should be removed from his own home and placed in a good foster home, if one is available. The problem is to find a satisfactory foster home for a handicapped child at the rate which can be paid by most state or private organizations. If a good foster home cannot be located, then the child should be sent to the best institution available.

It may be said that a home which is good enough for the seeing children of the family is good enough for a blind child. Usually this is true, but this belief does not *justify keeping a visually handicapped child in a home which is not fit for his seeing brothers and sisters.* As a rule, all that the organizations for the visually handicapped can do is to see that the blind or partially seeing child has a fair chance and to wish that the seeing children of the family might be given an equally good start in life.

Sometimes a visually handicapped child may need to go to a residential nursery school for a brief period of time, in spite of having an excellent home. The circumstances attendant upon his blindness, or for that matter, circumstances having no direct connection with him, may make that home temporarily a bad place in which to leave the child.

The Arthur Home is especially grateful to Commissioner William J. Ellis, of the New Jersey Department of Institutions and Agencies, and to Miss Lydia Y. Hayes, Executive Secretary of the Commission for the Blind within that Department, for the opportunity of initiating our Extension Service in New Jersey. Thanks to their cooperation and that of their workers, Mrs. Dorothy Snell Murphy, who came to the Home as Superintendent but who is now Supervisor of Extension Service, has visited all the preschool children with severe visual defects of whom there are records in the State. She has made recommendations concerning them to the Commission for the Blind. Eight of the children are now being trained in their own homes, with their parents and other relatives, by our extension teacher, Miss Josephine Taylor. Some were found to need care in an institution for the feeble-minded or for the epileptic, and a few were already in such institutions. To some of the children whose parents had to a large extent been able to solve their own problems so that the development of the child was satisfactory, only occasional visits from the extension teacher are necessary. One or two children have been recommended for admission to the Arthur Home for a few months.

The next state to offer its cooperation was Pennsylvania. Dr. O. H. Burritt of the Pennsylvania Institution for the Instruction of the Blind and Mr. B. S. Joice of the Western Pennsylvania School; Dr. Frank H. Reiter, Chief of Special Education of the Department of Public Instruction, and Mr. S. Mervyn Sinclair of the State Council for the Blind; and Mr. R. H. Latimer of the Pennsylvania Association for the Blind; all of these have helped most cordially to make our Extension Service effective in that State. Although no report can yet be made on Mrs. Murphy's work in Pennsylvania, enough has developed already to warrant considerable optimism on our part.

Until the last five or ten years few people have been conscious of the need for special training of the visually handicapped preschool child. Consequently, no state has an adequate program for their care at the present time. Through our Extension Service and through other forms of educational publicity, the Arthur Sunshine Home and Nursery School for the Blind hopes to arouse educators, doctors, and social workers to the need for definite and adequate provision for these children so that they may enter school with as few additional handicaps as possible. If our efforts help to promote the cause of other physically handicapped preschool children, we shall be glad.

LAZINESS: A PROBLEM IN PRACTICAL PEDAGOGY

Samuel P. Hayes

"He's just naturally lazy!" How familiar that sounds and how easily we sympathize with the exasperated teacher who sums up her weeks of futile effort with this emotional outburst. But is this the best the teacher can do? Such a statement amounts to a complete surrender: having failed to get results through the use of the customary methods, she gives up the battle with the excuse that since laziness is a part of the boy's nature, she is justified in washing her hands of him. Can man by thinking add one cubit to his stature? If there is a determiner for laziness in the germ plasm, can anyone be expected to counteract it by environmental influences? There is something inevitable about "nature."

But is it not possible that we have been a bit hasty in assuming that laziness is a fundamental native trait? Perhaps it is acquired, and a study of the causes that produce it may suggest a remedy; perhaps it is a symptom of some physical or mental condition, and therefore curable when the underlying difficulties are corrected; perhaps we have been too much impressed with the single case which has raised our wrath so our judgment has been a biased one, as most emotional judgments are. A survey of the types of cases which arouse us to project upon others the unlovely adjective may give us light on many sides of the question of laziness. Certainly we must look to science rather than to prejudice for our solution of the problem.

All about us we see people with lazy streaks. There are boys and girls whom everybody considers good, yet who use all conceivable devices for slipping out of their home duties; they leave their beds unmade, their pyjamas lying on the floor. They have plenty of time to spend in reading the Sunday newspaper, but having thrown down each part as they finished it, they cannot stop to pick up the scattered sheets. Unless we watch them, many children will not bother to remove their rubbers in school, preferring the discomfort of perspiring feet to the effort of taking off rubbers which they will soon have to put on again. Grown-ups often do no better: how frequently a caller will not trouble to remove an outer coat, and embarrasses us with the implication that a brief visit is intended! Many men carelessly drop ashes from their cigars or cigarettes without a thought for the despairing housekeepers who try so hard to keep their homes neat, And sometimes a "lazy" action seems deliberately planned to serve an ulterior end, as in the case of a nurse who, in going back and forth to a room where a child was sick, stepped over a toy on the floor all day long without bothering to bend over and pick it up. That was not her job! Are we not justified in claiming that actions like these are called "lazy" simply because we do not take the trouble to look for the reasons which prompt them? They certainly do not point to laziness as a general, native trait, for these same people are conspicuously active and energetic in other situations.

Laziness being a term of opprobrium, we tend to bestow it upon people whose work we do not understand, especially if their hours of labor are less than our own. The unskilled laborer, fatigued by his long periods of muscular effort, readily concludes that the white-collar man has an easy job. Anyone who sits in a chair all day must be lazy, even though his hours are as long as those of the man who digs or carries burdens. Many factory workers think the boss has an easy time because he comes to the office late in the morning; but the employees do not realize that the higher one gets in an industrial organization, the more night work he has to do. The actual number of hours that the teacher spends in the classroom may be much less than the number of hours set

by the N. R. A. codes for various kinds of workers. For this reason many people think that teaching is an easy job which attracts indolent people; they do not realize that in the public schools teachers have quantities of paper work, and that in colleges the teachers have to spend more time in wide reading and preparation of lectures than any type of manual laborer puts upon his job. Six o'clock is not the end of the day for the teacher, any more than it is for the business executive. A minister may have to present only two sermons a week to his congregation, but each sermon may well have cost him twenty hours of preparation; and, added to this, he has his innumerable conferences and other pastoral duties. Accusations and generalizations are very easy to make and they are very likely to be unjustified. Are we not in danger of making a false accusation every time we call another person "lazy"?

This is just what the moralists have been doing from time immemorial. "Go to the ant, thou sluggard," they say. They seem to think that some people are born lazy and probably enjoy it. They point to the shiftless families in the city and poor white trash in the southern mountains; they read Rip Van Winkle and wag their heads with delight as they consider how superior they are themselves, and how well that picture fits their friend, Mr. X. A man comes to the door for help and they show him the woodpile. Being unemployed, he must be lazy and shiftless, and perhaps a little muscular activity will help to "reform" him. They do not realize that he may be sick or undernourished, or the victim of misfortunes which have unjustly put him in the class of the unemployed. Their treatment is a method of reform and punishment which is sometimes as ill-advised as the ancient system of exorcism for the devils assumed to cause insanity.

The scientist takes a very different attitude. The doctor and the psychologist find many different kinds of laziness and attribute them to a wide variety of causes. Having no panacea for the cure of all diseases, they try to make their treatment fit the type of the disorder. Shiftless individuals are often found in families with a low level of intelligence; long periods of undernourishment, lack of education and discouragement may produce a reckless and inefficient attitude toward work. "Lazy" boys and girls may be physically unable to do what is expected of them because they are growing too fast or have some glandular trouble which dulls their energies. We are not surprised when people convalescing from a serious illness are unable or unwilling to exert themselves; we expect them to limit themselves to passive pleasures like books, movies and the radio, and we are not surprised that they prefer detective stories to history. It is quite possible that a good many boys and girls in the teens are temporarily in a condition like the convalescents', and that in both cases all one can do is to wait and to hope for better things. Activity is more natural to young people than passivity and if in this period we find them willing to put their energy into games rather than work, we must not suspect moral obliquity, but rather be thankful that they are willing to put their strength into anything, looking forward to the day when success in games may motivate them to such success in useful work.

Apparent laziness may be a means of escape from something a child or man does not wish to do. Probably many children are unwilling to practice regularly on the violin or the piano because they do not accept the goal toward which the practice is directed. They may not realize the advantages of such skill when they join larger social groups later in life. More than one young man has failed in an occupation because he was not placed where his talent could be used. An artistic man forced into business may give all the evidences of laziness, when nothing would have been too strenuous for him in the life he would have chosen to lead. Cases

are reported in which serious physical symptoms have been developed, making it impossible to continue a hated occupation. Such behaviour is not explained by the word laziness; the excuses, evasions and symptoms are merely signs of inner conflict.

Some adults have lazy habits because they were spoiled in youth by parents always ready to wait upon them. They naturally tend to expect the same treatment at the hands of the larger world. When they later act as they were accustomed to in their parents' homes, people impatiently call them slackers. They may continue to give such an impression until some strong motive stirs them to change. Many young men and women have risen above such attitudes when they had homes of their own, or a business demanding the use of their highest abilities. Plenty of college students will never bother to turn off electric lights which an institution pays for, but when they have homes of their own and monthly bills to meet, this symptom of laziness may suddenly disappear.

Is it not wise, then, to consider laziness as merely a symptom, and to try to find its cause, rather than to take the fatalistic position that some people through birth or training are chronically lazy and beyond redemption? It is certainly very unwise to brand any child by attaching to him a bad name. We have only to note how nicknames stick and how disheartening they are, to realize the mistake in calling a child "lazy." The boy whose companions have dubbed him "fatty" or "brick top" may carry the embarrassing title all through life, and although he may harden himself and laugh it off, there is always a little sting to a nickname that implies inferiority. In fact, we have considerable evidence to show that one of the best ways to make a person lazy is to call him so.

If laziness is a symptom, the prospect of cure is decidedly hopeful. Having found the cause, it is often possible to change the conditions and remove the symptoms. Changes in diet, changes in social treatment, re-education, arousal of new motives—all make their contributions to the cure. Where nothing can be done immediately, we can always count upon the influence of growth and maturity, supplemented by the satisfactions of partial success and the encouragement of such efforts as the so-called lazy child may make. For the individual, the conquest of laziness is one of the major indications of successful growing up.

(*Continued From Page 64*)

in this article are taken from the answers to the questionnaire; any theories or statements are presented for what they are worth. The writer earnestly hopes that readers will correspond with him regarding this very interesting field of improving the typing opportunities of blind pupils. The survey was made in the interests of blind pupils; this summary is presented in the hope that it may stimulate greater activity for the blind in the field of typing. The writer is open to any constructive criticisms, suggestions, or pertinent comments and he hopes that the article will be accepted as an honest and sincere effort to improve conditions for the blind and not merely to supply material for futile disagreement or worthless criticism.

BOOKS AVAILABLE AS GIFTS

The Trustees under the Will of Mary Baker Eddy, publishers of Mrs. Eddy's works, announce that they have a limited quantity of "Rudimental Divine Science," by Mary Baker Eddy, in New York Point and American braille, to be given away free of charge.

These books are offered for free distribution through agencies for the blind. The publishers cannot undertake to fill orders to individual blind persons but will be glad to fill requests from agencies. Requests should be addressed to Mr. Harry I. Hunt, Publishers' Agent, One Norway Street, Boston, Massachusetts.

WHAT SHOULD BE STRESSED IN ARITHMETIC AND GEOMETRY IN SCHOOLS FOR THE BLIND

Harold E. Hein and Diedrich Ramke

In the teaching of mathematics in schools for the blind a number of problems arise with which the instructor of seeing children is not directly confronted. In the first place, because of the cumbersome methods required in putting problems down in writing, especial stress should be laid on mental arithmetic. The student should be required to memorize the simpler multiplication tables from the very beginning, and as he acquires proficiency in these, more complicated tables should be added with each advancement in the grades. A portion of each recitation period, or at least one or two periods each week, should be set aside for intensive drill. By the time the student has completed the elementary course he should have committed to memory the multiplication tables up to and including twenty times twenty.

Very often complicated multiplications may be simplified in order to facilitate their mental solution. For example, when two large numbers are to be multiplied together, the student finds it very difficult to retain the several partial products in his mind until the process is completed. By breaking one of the numbers up into its component factors, however, and then multiplying the other number by each of the factors in succession the process can be completed without difficulty or confusion.

There are, of course, upper limits to the size of the numbers involved which the average student can readily retain mentally. Above these limits the attempt of the student to carry numbers in mind often causes him to become confused and necessitates beginning the entire process anew—thus resulting in a loss rather than in a saving of time.

The handling of such figures is greatly facilitated by the use of the Brannan arithmetic slate. This instrument makes the setting down of numbers very rapid and easy, and its use should be especially encouraged.

All available methods for shortening and simplifying the fundamental processes should be stressed in the teaching of arithmetic. Most instructors are probably familiar with the short method of multiplying by twenty-five, in which two ciphers are annexed to the multiplicand and the resulting number is divided by four. Again, we can easily determine whether a number is divisible by six, for this is true if the figure in the unit's place can be divided by two, and if in addition the sum of the digits is divisible by three. There are other innumerable time-saving devices, many of which will probably occur to the instructor or perhaps to the student himself.

A noted blind mathematician is reputed to have made a statement to the effect that it is sheer cruelty to try to teach algebra and geometry to any but the brightest blind children. Such a statement is doubtless an exaggeration which has some basis in fact. It serves to recall us to the realization that in teaching these subjects, particularly geometry, to the blind students we should not conform too closely to the methods of presentation employed in the instruction of seeing children, nor should we always emphasize those phases of the subject upon which particular stress is laid in the teaching of geometry in our public schools. The general end in both instances is the same, but the difference lies in the methods of its attainment.

Some educators contend that geometry is a subject which might well be eliminated from the high school curriculum; this is a view which is not held by the present writer. There are pupils, however, who are so deficient in mathematical ability that adjustments should be made in the course of study which would permit them to expend their efforts in lines more suitable to their natural aptitudes. It is not our purpose, however, to discuss the merits or demerits of requiring

a knowledge of geometry as one of the conditions for graduation from high school.

In the teaching of geometry to blind children it is essential that the pupil be well grounded in the definitive statements and general mathematical truths which form the foundation upon which the more advanced phases of the subject are to be built. An accurate knowledge of the meaning of such fundamental geometric terms as angles, circles, straight angles, and right angles should be insisted upon; although it is not necessary that a strict adherence to the phraseology of the text be required. It is the experience of the writer, however, that when students attempt to formulate their own definitions they are extremely likely to omit certain necessary conditions. The pupil should be thoroughly familiar with the axioms and postulates before being permitted to proceed to the proof of propositions, for such a procedure with only an inadequate knowledge of these important mathematical truths is analogous to attempting the solution of problems in arithmetic without a complete mastery of the fundamental processes. The instructor must, of course, employ every means at his disposal to clarify the meaning of these statements in order to prevent their parrot-like recital on the part of the pupil with little or no comprehension of their significance.

With a relatively small amount of additional effort the pupil can learn the axioms and postulates in the order in which they occur in the text. There is no particular value in this except that it results in a great saving of time, since in the written proofs such statements are almost always referred to by number. If the student is unfamiliar with the author's numbering, he will probably be unable to apply the proper statement and will be obliged to consult the list of axioms and postulates given near the beginning of the text. The chances are that the list will not be in the volume which he is studying. In the proofs of propositions reference to preceding theorems, corollaries, or problems are usually made by citing the number of the paragraph, and since the text is embossed in quite a number of volumes, this often necessitates the pupil's referring to a volume previously studied. It would be too great a waste of time and energy to require the pupil to connect each statement with its paragraph number, but a few citations occur so frequently that he should be encouraged to do so in those particular instances.

It often happens that figures which appear very simple to the eye present numerous complications when a knowledge of their outlines has to be acquired through the sense of touch. This sense cannot take in the figure as a whole as can that of sight; but instead the lines and curves must be traced out in detail. Propositions requiring such complicated figures should be given only a cursory consideration whenever they are not of prime importance; while the greater stress should be placed on theorems whose proofs require simpler figures. Geometric forms cut from paper, cardboard or wood often furnish valuable aids in the solution or proof of propositions requiring complicated drawings.

The instructor should not become discouraged if the pupil does not immediately comprehend a seemingly simple relationship between two figures or parts of figures. It is often necessary to take the child's hand and trace with him the outlines of the geometric form several times before he can acquire a definite mental image of the figure with which he is dealing. Too much emphasis cannot be placed upon the necessity of developing in the mind of the student a distinct mental concept of the nature of the figure upon which the proof of a given proposition depends. This can frequently be done by beginning with a simpler and more fundamental geometric form, and then adding the supplementary lines in order to complete the proof.

In the instruction of seeing children a considerable amount of skill is required in

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A POULTRY PROJECT IN THE CONNECTICUT SCHOOL FOR THE BLIND

Florence Barrett

Explanatory note: The project described below has grown out of efforts over a period of some years to interest a group of pupils in this school in poultry keeping. Previous to our present scheme we have tried to use the school flock as a basis for practical training. These attempts were only partially successful. We are now convinced that a complete separation is desirable between the pupils' poultry activities and the institution flock. The 4-H Club organization seemed to us to promise most as a means to this end. We now have, thereby, a definite profit incentive and in addition the stimulation afforded by competition among all similar clubs in the county and state. Close cooperation with and definite help from the State College is also of large value to the enterprise.

The author of the article, Miss Florence Barrett, teacher of commercial subjects, modestly refers to the voluntary service rendered by one of the teachers. We realize that the succss of this undertaking is largely due her as it would have been impossible to initiate the project without a paid instructor had it not been for this contribution during its beginnings. I am glad to say that Miss Barrett still continues her interest and efforts in behalf of the venture.—Gordon Hicks, Superintendent, Connecticut School for the Blind.

The Connecticut School for the Blind now numbers among its student body ten potential poultry farmers—six boys and four girls. With one exception, the six boys are the same ones who ventured upon the enterprise of poultry raising in the fall of 1932.

Soon after school opened that year we had as speakers two young men who were connected with the state 4-H Club work. Their enthusiasm was so contagious that after they had pointed out some of the advantages, financial and otherwise, of this line of endeavor, they had little difficulty in interesting many of the boys who volunteered to start at once. Of course, some were more fired by the contagious enthusiasm of the speakers, and perhaps by the possibility of monetary gain, than by an actual desire to do the work necessary to learn to become proficient in poultry raising and to provide a possible means of future independence. A selection was finally made, and six boys ranging in age from fourteen to nineteen years were chosen, and a 4-H Club was organized. One of the members of the faculty offered to act as local leader and contribute in any way possible toward the success of the club. The County Farm Bureau sent literature and record forms. There were daily production cards, expense account books, and a book for the record of all meetings.

A necessary item of equipment was, of course, a flock of chickens. The school provided ninety pullets and housed them in one end, or rather in three sections, of the poultry house used to pen the school flock. These birds were to be paid for by the boys at the end of the school term from the money received from the sale of eggs.

An arrangement was made whereby two boys, one totally blind and one with some sight, were to have complete charge of one section or pen, housing thirty chickens.

After the flocks were properly housed, it was essential that some information be obtained on the care of poultry. The boys read all the books they could find in braille pertaining to the subject, and the club leader read to them the literature received from the Farm Bureau and various other sources. With the help of the young men from the State College and the information gleaned from any and every source, most of the chickens struggled through that first year. There was an epidemic of chicken pox, some roup, and a few minor operations were

necessary; but on the whole it was a successful year in spite of the fact that it was largely a matter of learning to do by doing.

The first sale was on October 27 when four dozen eggs were sold for thirty-eight cents a dozen—net cash, one dollar and fifty-two cents, real money! The boys were their own salesmen. They canvassed the neighborhood and secured a number of regular customers. The eggs were fresh, the prices were obtained from the daily market bulletin, and the boys were faithful and accommodating in the matter of delivery.

From the latter part of October to the first of June the production was 8,313 eggs. The total sales amounted to $206.26, and the operating expenses were $66.65.

At the close of the term, the school purchased for $93.50 the hens which it had sold the boys the previous fall for $144; the difference being deducted from the profits of the enterprise. When everything was figured out, it was found that there was a net cash balance of $90.26 which was divided among the boys proportionately according to egg production. From one pen each boy received $17.50, from another $15.14, and the third group received $12.49 each.

As one of the boys did not return to school the next fall, another was chosen to take his place. With the benefits of one year's experience, including mistakes, behind them, the boys started out on their second year. But this time they had competition from a group of six girls who had also organized a club. During the summer the school had built on the girls' side of the grounds a new poultry house having three sections, and space to house ninety birds. The chicks provided for the girls were hatched about a month later than those furnished the boys, which gave the boys about a month's advantage while egg prices were highest. All was not smooth sailing for the young ladies: production was slow, cleaning coops was hard work, and there was a great deal of sickness among the birds; but they did not become discouraged, and proved themselves efficient not only in caring for the hens, but also in keeping their coops in ship-shape order.

In April of that year the boys in charge of one of the pens received a third prize in the County Egg Laying Contest. During the same year the club entered some eggs in a poultry show ,and one box received a rating of 94%, which gave them fifth place.

Production for the year was greater than during the previous year, the boys having a total of 9,723 eggs, and the girls 6,600. At the close of school in June the chickens were disposed of in the same manner as before, and distribution of receipts made in the same way. The cash balance was $165.66, of which the boys received a large proportion. Two of the boys received $22.86 each. Although the girls did not have nearly as much owing to their late start, they were thrilled with what they did make. Two of the girls used the money to pay part of their expenses at a summer camp, one took piano lessons during the summer, one put her share toward the purchase of a typewriter, and some bought clothes. One boy bought a radio, and some of the profits found their way into bank accounts.

Because of the continued interest in the club work, Mr. Gordon Hicks, the Superintendent of the School, this year secured a young man who is a graduate of the State Agricultural College as part-time instructor. The course is now more systematized, three of the regular class periods each day now being devoted to the work. One period is devoted to theory, discussion and laboratory work, such as weighing, grading, and boxing eggs; while the other two are given over to practical work in the coops—culling, cleaning, changing litter, and many other incidental tasks.

If things continue as they are it would seem more than likely that this will be the club's most successful year. It is also interesting to note that the girl members of

the club are running away with all the honors. Their egg production is now far in advance of that of the boys, and is still increasing. The young men who once ridiculed the idea of the girls being farmers, are not nearly so sure now, for the division of proceeds this year will not be so decidedly in their favor.

Already one of the boys has made definite plans for profiting from the training and experience he has received during the past three years. During vacations and weekends at home he has prepared for his future work by building and outfitting a chicken coop in anticipation of the flock which he expects to have in the near future.

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the use of geometric tools; but these implements can be used only to a limited extent in the teaching of blind children. Only those pupils who are unusually adept with their hands can draw figures with a sufficient degree of accuracy to be of any practical value. Those who are able to do so should be encouraged to draw their own figures, but this phase of the subject should not be stressed. It is because of the impracticability of constructing figures with any degree of accuracy that relatively more stress should be laid on the proving of theorems and less attention given to the solution of problems. Blind students are able to handle proportions with very little difficulty and more stress should be given to this phase of the subject than is probably done in the instruction of seeing children.

Miss M. M. R. Garraway, in the chapter, "Suggestions to Teachers," which she contributed to the 1934 Revised Edition of the *Handbook for Home Teachers of the Blind,* published by the National Institute for the Blind, London, makes the point that teachers as well as pupils can learn by imitation and advises all teachers to "avail themselves of every opportunity of seeing good teaching."

The Florida School for the Deaf and Blind, at St. Augustine, is celebrating the fiftieth anniversary of its founding. A special anniversary night with an appropriate program will be held sometime during March but in the meantime the school has combed its records for the stories of its development. A recent issue of the St. Augustine Evening Record carries three pages of pictures of the grounds, and of student activities, biographies of outstanding students and teachers, and description of the training given to the blind and the deaf pupils. There will be two graduates of the department for the blind this year. Dr. Clarence J. Settles, present head of the institution, has been there since 1932.

The notation-graph, invented by Mr. Charles Beetz of the Beetz Studio of Music, Brooklyn, New York, is now available, according to an announcement received from the American Printing House for the Blind, Louisville, Kentucky, which has charge of the manufacture and sale of the device. The notation-graph, as previously described in the *Forum,* is a model of the Grand Staff mounted on a cork base to which the various musical symbols may be attached with ease, thus making it possible for the blind to express musical phrases in the notation used by the seeing. In addition to familiarizing the blind with the system of notation used by the seeing, it enables the blind teacher of music to teach the reading of music to his seeing pupils.

The staff consists of ten lines, the Treble and Bass Clefs, and a brace, all of which may be removed from the board when necessary but which should be considered permanent. The staff is made of wire, as are the musical characters — sharps, flats, various notes, etc.—and these characters are provided with two pins by which they may be easily fastened to and removed from the board.

Eighty-six orders have been received against the first lot of 100 sets manufactured, the American Printing House informs us.

THE TEACHERS FORUM
for
Instructors of Blind Children

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The Editor will not be responsible for opinions expressed in signed articles.

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FOUNDATION SCHOLARSHIPS AVAILABLE

Each year the American Foundation for the Blind awards a limited number of scholarships of $250 each to blind students who wish to prepare themselves for some vocation.

Awards are made by a special Committee, and the factors taken into consideration include scholastic ability, need for financial assistance, and practicability of vocational objective. Since the number of applications is always greatly in excess of the number of scholarships available, and the Committee wishes to assist as many students as possible, preference is usually given to those who have completed the general educational prerequisites for their chosen vocatons, and are ready to begin special vocational or professional training. In exceptional circumstances, however, awards may be made to undergraduate students in colleges and universities.

Among the vocational objectives of students who have received scholarship awards in the past have been osteopathy, secretarial work, teaching, social work and music.

Application for scholarships should be in the hands of the Secretary to the Scholarship Committee not later than April 1 in order to allow time for securing letters of reference, etc. The Scholarship Committee acts on the applications during the month of June, and awards are announced as soon as possible thereafter. Scholarships awarded in June, 1935 will be for use during the academic year 1935-36.

Requests for further informaton and for application blanks should be addressed to the Scholarship Committee, American Foundation for the Blind, 125 East 46th Street, New York, New York.

Editor's Note: The serious illness of Dr. Edward M. Van Cleve, until March 1 the principal of the New York Institute for the Education of the Blind, obliges us to omit the editorial we expected to have from him for this issue. The series of editorials by outstanding educators of the blind will be continued, however, in later issues of the *Forum.*

Our Contributors

Mr. Carl Engler has been the commercial teacher at the Wisconsin School for the Blind, Janesville, since 1926.

Dr. Ralph Vickers Merry, the author of several studies in the education of the blind, is professor and head of the department of Secondary Education at Morris Harvey College, Barboursville, West Virginia.

Miss Kathryn Maxfield carries forward her study of the preschool blind child as director of the Arthur Sunshine Home and Nursery School at Summit, New Jersey.

Dr. Samuel P. Hayes is Professor of Psychology at Mount Holyoke College, South Hadley, Massachusetts.

Mr. Harold E. Hein and Mr. Diedrich Ramke, graduates of the Louisiana School for the Blind and of Louisiana State University, are both instructors in the School for the Blind, Baton Rouge. Mr. Hein teaches mathematics in the Elementary Department and Mr. Ramke mathematics and science in the High School Department.

Miss Florence Barrett, author of the article on a poultry project in the Connecticut School for the Blind, is the teacher of commercial subjects in that school.

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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HOW TO HANDLE TEST RESULTS—A PLEA FOR THE WIDER USE OF GROUP TESTS

SAMUEL P. HAYES, PH.D.

Many teachers of seeing children consider objective group tests the greatest contribution of modern educational psychology. Realizing the difficulty of making a fair appraisal of the written work of children whom they know very well and probably like or dislike as a result of daily association, they welcome a method by which they can measure accurately a large number of subject items and obtain numerical scores which indicate with some exactness the absolute and relative success of their pupils. Of course, standardized tests are preferred, as these give teachers a chance to compare their own pupils with those in other schools; but if a teacher composes her own tests and sets them aside, she soon has a collection which will serve in comparing succeeding classes. The enormous number of tests now published is an indication of the extent of this movement and constitutes a challenge to any teacher who has not tried objective tests.

It has occurred to the writer that teachers in schools for the blind may have hesitated to use objective group tests because of some uncertainty concerning the method of handling the test results and that a clear explanation of the procedure might induce more teachers to give such tests a trial. So he is here presenting the steps necessary for dealing with test results, taking as his data the scores obtained from a recent use of the Otis Classification Test, Part II, a short group test of general intelligence adapted for use with the blind by Miss Ruth Sargent at the Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, and reported in the *Forum* of November, 1931 (Vol. 4, No. 2, p. 30). The same procedure may be followed with any of the tests of school subjects presented by the writer in his "Self Surveys in Schools for the Blind," published at Overbrook in 1921, with the Stanford Achievement Test and the Grey Oral Reading Check Test, adapted for use with the blind by Miss Kathryn Maxfield and published by the American Foundation for the Blind in 1927, with the Monroe Standardized Silent Reading Test, adapted for use with the blind by Mrs. Margaret Owen Thomas at Perkins Institution and published in the *Forum* 1929, Vol. II, No. 5, p. 6, and with any tests the teachers may themselves adapt from seeing models or may create from their own teaching materials. Of course, no comparison with norms will be possible with these original tests, until repeated or wide use shows what may be expected of blind children.

When first assembled the scores from the recent use of the Otis Classification Test in one particular school were as follows:

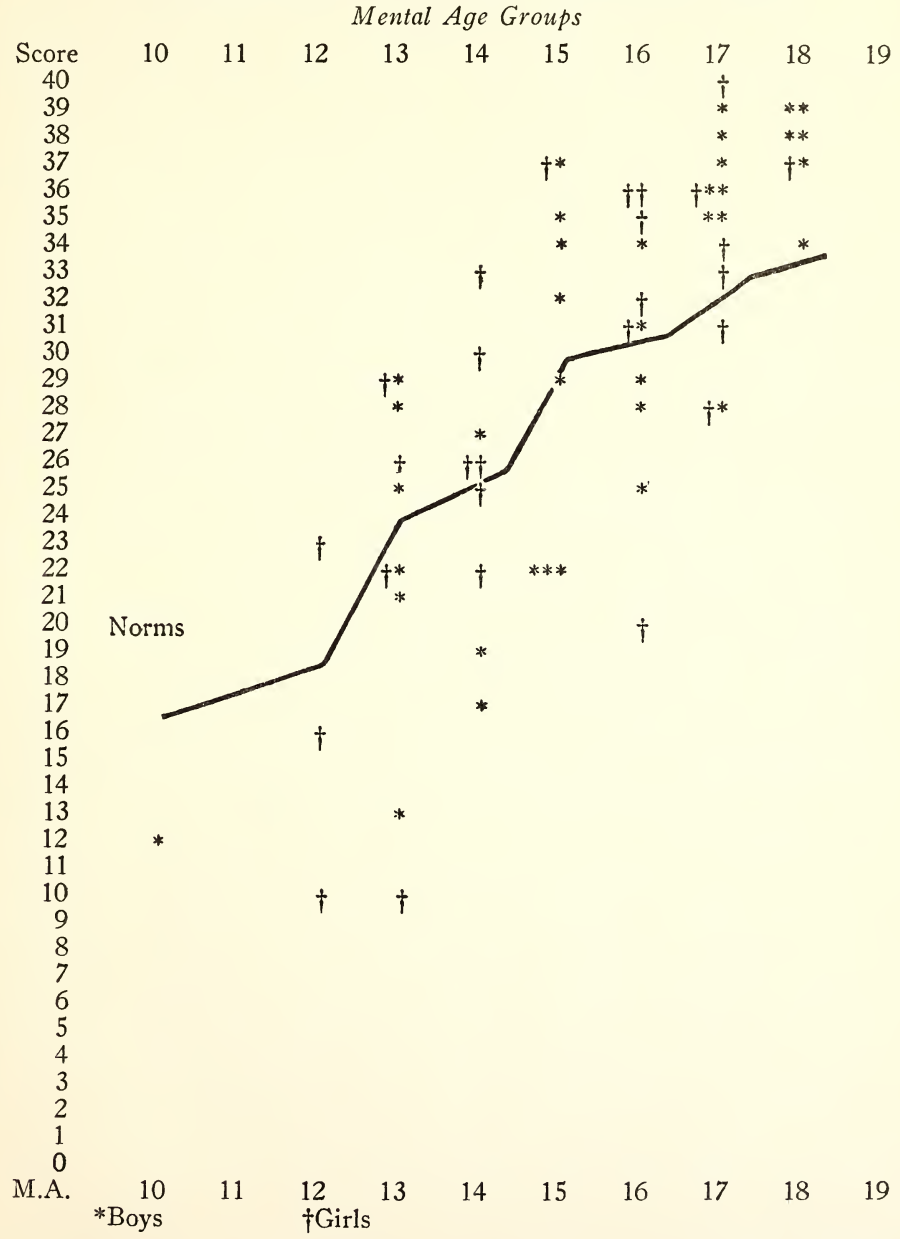
TABLE I. RAW SCORES IN THE OTIS CLASSIFICATION TEST PART II

Grade 6—10, 12, 26, 26, 23, 22, 30, 10, 21, 16
Grade 7—22, 27, 25, 17, 19, 28, 29, 13, 34, 26
Grade 8—28, 29, 37, 33, 31, 34, 31, 28, 22, 34
Grade 9—37, 29, 36, 35, 32, 22, 22, 25
Grade 10—37, 33, 35, 22, 38, 39, 37, 39, 40, 35, 37, 38, 36
Grade 11—36, 39, 31, 34, 32, 28, 25, 36
Grade 12—20, 29, 36, 38, 35

A casual inspection of this table indicates that while the scores tend to rise from grade to grade, there are some scores in each grade which are decidedly below the average for the grade, and that there is considerable overlapping of scores from grade to grade. But, knowing the great inequalities commonly found in grades of blind children, one naturally seeks some other basis of comparison and in this case the solution was

suggested by Miss Sargent's article. When this test was used with 210 pupils in two large eastern schools, Miss Sargent found a correlation of .586 with the I. Q's and a correlation of .755 with the mental ages obtained by the use of the Irwin-Hayes adaptation of the Binet Intelligence Tests, and gave her norms in terms of mental age. Although both of these correlations are significant, we preferred to use mental ages as the basis for a study of the results, since the mental ages give an upward trend from year to year of chronological age and may be taken as the equivalent of grade groups

TABLE 2. RESULTS OF THE OTIS CLASSIFICATION TEST, PART II, DISTRIBUTED ACCORDING TO MENTAL AGE.



in which pupils are assembled who have approximately the same abilities. Our first step then was to make a scatter diagram of these scores plotted according to the mental ages of the pupils tested, and across this diagram to draw a smoothed curve from Miss Sargent's norms. To smooth this curve we used the customary method of adding the scores from three adjoining mental age groups, dividing this by three, and substituting the new value for the original norm given by Miss Sargent. Ordinarily one would use cross-section paper for such a scatter diagram; we have omitted the lines to save expense in printing.

Certain points at once emerge when this diagram is studied.

1. The pupils in this school show about the same ability as was found in two large schools where this test was standardized. The scores follow the same upward trend as the curve of norms, and there are about as many scores above as there are below the curve.

2. There is no conspicuous difference between the scores of the boys and those of the girls.

3. There is a small number of poor scores which need investigation.

If the reader will imagine two lines parallel to the line of norms, one line about five points above and the other about five points below the line of norms, he will find that the area so enclosed will include a large percent of the scores, leaving only a small number below this central area, whose scores, therefore, require interpretation. We may assume that the scores in the enclosed area represent natural differences among individuals whose abilities do not vary widely, as indicated by their mental ages, and that the very few with scores above this area are superior pupils whose test results show that they probably do not need special attention. A further study of the pupils whose scores appear below the central area shows that they can be treated as two relatively distinct groups, (a) those with fairly low I.Q.'s, whose scores in this test may be regarded as the natural result of low native ability, and (b) those of apparent ability who found this test particularly difficult. These points become plain in the following table, where we have presented the cases arranged in order from lowest to highest by I.Q., with the chronological age (C.A.), the mental age (M.A.), the Otis norm for each mental age, the score obtained in the test, and a coefficient of efficiency in this test, obtained by dividing the score obtained by the expected score for the same mental age.

TABLE 3. ADDITIONAL INFORMATION CONCERNING PUPILS WHOSE SCORES WERE CONSIDERABLY BELOW THE NORMS FOR THEIR M.A.

		C.A.	M.A.	Otis Norm	Otis Score	Coefficient of efficiency i.e. score divided by norm
(a)	Low I.Q.'s					
	77	18.6	12.4	19	10	57%
	83	18.4	13.5	24	13	54
	85	20.0	13.7	24	10	45
	89	16.0	14.3	25	19	75
	93	20.3	14.11	25	17	67
	94	21.8	15.1	30	22	74
(b)	I.Q.'s Approximating average					
	94	13.6	12.8	19	16	85
	95	16.1	15.2	30	22	74
	96	17.0	15.5	30	22	74
	100	23.10	16.1	31	20	65
	101	21.11	16.3	31	25	81

It will be noted that most of those in group (a) are older pupils whose added years of life and perhaps of school experience have not given them success in either the individual Binet tests or the Otis group tests. In group (b) one must study each case to see, for example, whether the small amount of braille used in this test put them at a disadvantage, whether the test aroused some emotional condition so that they did not do themselves justice, whether their physical condition on the day of the test was below normal, so that this acted as a distraction from the main business in hand. Then one might plan to repeat the test, or give an alternative form of it, at a later date, and compare the results of the two trials. It is commonly assumed that a group test may give an incorrect picture of a small number of the group tested, which will be compensated for by repetition. Even then, there is a very great saving in time over that needed for individual tests, and such a large number of items can be covered that the teacher may determine which parts of her work have not been sufficiently emphasized.

In general the procedure in dealing with the scores obtained in group tests may be summarized as follows. First make a scatter diagram which will indicate the relationship of the individual scores and the group as a whole to the norms. Then study the exceptional scores, particularly the low ones to determine whether they have not been properly measured, or really lack ability in the trait measured. From this study, methods of improvement may be planned for the hopeful cases, while the possibility of reclassification or regrading must be considered for the others. In case the group as a whole falls below the norms, the question naturally arises whether the methods of teaching, the arrangement of the curriculum, or the quality of the available student material is to be blamed. In any case science advises us to face the facts.

A. A. W. B. CONVENTION

Programs of special interest for teachers of blind children are included on the tentative program of the A. A. W. B. which is to be held in Louisville, Kentucky from June 24th to 28th inclusive. Besides the general meetings at which many problems of education will be discussed, group meetings will be held on Thursday afternoon for superintendents of schools for the blind, and for teachers in classes for the blind in residential and day schools. Following is the tentative program for the latter group:

Difficulties Caused by Late Entrance:
Miss M. Blye Allan

Seven Months of Home Guidance Among Visually Handicapped Pre-School Children:
Mrs. Dorothy Snell Murphy

Special Emphasis on the Above Topics:
Miss Alma Stursberg

How May Commissions and Schools for the Blind Cooperate More Closely:
Robert Lambert

Vocational Guidance:
Benjamin Berinstein

Scholarship Funds for the Blind:
F. M. Longanecker.

The Pennsylvania Institution for the Instruction of the Blind at Overbrook has just completed a revised application form for use in considering prospective pupils in the school. Its purpose, as stated on the blank, is "to help us know more of the causes of blindness and to enable us to better understand and help the applicant in case he is admitted and becomes a pupil."

The application blank was developed with constructive criticisms by the school physicians and opthalmologist. It is divided into three parts: one section covering general information to be filled in by the parent or guardian; the second dealing with health, to be filled in by a competent physician; and the third dealing with the eye conditions of the prospective student to be filled in by a physician who is an eye specialist. Each person responsible for completing the various sections must sign the blank.

DR. ALLEN SAYS:

EDUCATION IS A WAY OF LIFE.

After seven thrilling years at Overbrook I told a committee of the Massachusetts Legislature[1] that the net effect of that reconstruction and reconditioning, as measured by their placement at large, had been to double the efficiency of its departing pupils and that Perkins Institution merited an equally beneficial rehousing. I fully expected to incorporate in my second building program the best features of my first.

Why then did we rebuild at Watertown after different plans? Because, after three years' intimate study of Dr. Howe's family system for his girls in South Boston and of Mr. Anagnos's for his kindergarten in Jamaica Plain, I reported that the general response to the self-discipline, self-expression and controlled freedom of it all had been fine and that to adopt any more institutional housing and regimen, even for the boys, would be a backward step. Meanwhile the Trustees had sent me abroad in search of a better plan, and I had found nothing so good.

What is the plan? Briefly stated it embodies the supposedly new idea that education is life rather than mere preparation for life; that social diffusion and responsibilities for the blind pupil at school must be the way of life there if it is to be so afterwards. Now in so far as residential institutions are decried, it is on the ground that they are artificial, essentially restraining and destructive of initiative, and therefore do not prepare for the normal life. But there are institutions and institutions, and life in a residential school, housing both pupils and teachers, built, furnished and run to provide and promote abundant self-help and group-helping duties and responsibilities, also example, should be a blessing, at least temporarily, to any child, particularly one who is blind and either neglected or coddled at home. Now meal times may be mere feeding times, or they may be as much more as those in immediate authority, and yet participating, are interested to make them; and the carefully chosen house mother and right-minded teachers will welcome the opportunity of the complete family plan made feasible through small groupings by cottages with only reasonable paid service, such as cooking. Perkins Institution, with its traditional element of simplicity retained (and now that of beauty added from London and Overbrook), has long had this plan in operation, variously successful, of course, according to the spirit of each household. Its advantages are obvious enough to those who look for them and are willing to contribute their own active helpfulness. Yet it is a poor plan wherever it is forced upon the superintendent or otherwise unsympathetically carried out. Most of our schools do not have it, either because their builders assume it to be costly to run (though neither Perkins nor Overlea, Maryland, which do have it, has the highest per capita cost among our institutions) or because of the prevailing notion that the teacher's function is to teach subjects and not to educate children, ignoring the fact that what educates them is chiefly contact with personality and culture; and the fact that the more this can be unconsciously impressed upon the very young the more easily their education is effected and the most lasting it becomes. Should not attractive appearance and good manners be a part of daily living?

We always welcomed new visitors to take a meal at one of our cottage families in Watertown. I used often to dine with professional guests there, and nothing I could show them gave me greater pride and satisfaction than the pupils' neatness, erect carriage, and general behavior, surely an essential part of their socialization for acceptability.

[1] See Perkins Annual Report for 1907, p. 32-40.

MAKING BEGINNING READING LESSONS REAL AND WITHIN THE CHILD'S EXPERIENCE

Anna Mahlenbrock

As there are very few modern readers for the blind child, I began an experiment last September which has given me much satisfaction as well as pleasure.

In my class is a small child, Agnes, who never talked until she was four years of age and comes from a home where she hears very little of the English language. She entered school at the age of six years with little knowledge of anything. She was timid and afraid to walk by herself, fearing she would fall or get hurt. It took a long time to get her to string beads or do anything with her hands.

One day last September, when playing ball with the group, I asked her if she would like to read about playing ball. To my surprise, she laughed and said she would like to read about the big red ball. As she gave me the sentences, I put them on the Hall braillewriter, repeating each sentence as I wrote it. I believe the noise of the writer and the repetition of the sentences added interest for the child. This was a new experience for the child of seven years of age, and she enjoyed reading the story with her tiny fingers. If she did not remember a word she would say, "I don't know this one, please tell me." Of course I told her. Do we not tell the first grade sighted child? Every day in this manner the child suggests her own reading lessons.

In October we moved to the A. Harry Moore School for Handicapped Children, where we were located on the fourth floor near the dining room. Agnes asked me if she might read about the school and the dining room. Together we made a little story about the dining room. It is as follows:

We have a lovely dining room.
I like to drink milk in the dining room.
We have good food to eat.
We sit at the table.
Mary helps me at the table.
After we eat we go on the roof.
I say, "Thank you Miss S——."

The principal of the school came in to see us one day and Agnes was reading. She asked the child to read the story. Agnes read about the dining room and the principal was surprised and became very much interested in the reading of braille. Agnes, after finishing reading, asked if she might read about Miss K., the principal. Miss K. permitted Agnes to "see" the dress she was wearing and Agnes said, "Miss K. has on a velvet dress." We now had another lesson. Our story of that day commenced with the sentence: Miss K. came to see us.

One day it rained quite hard and we could hear the rain on the window pane. Some one in the class said, "It surely is raining, listen to it on the window." Agnes said, "Miss M, may I read about rain?" So then we had a lesson on the rain. The next day I looked out of the window and saw the flag across the street. I told the children where the flag was and how it was waving in the air. We had a very interesting lesson about the flag. As usual Agnes wanted to read about it.

I usually tell the children about the dress I am wearing and let them feel the buttons, or the ornaments, the belt, the fur, the sleeves, in short, give them an idea of how the dress looks. Agnes, after feeling the buttons on my dress, and counting them, asked if she might read about buttons. That same day our principal brought one of the teachers to see us who had buttons on her dress. After being introduced, Agnes said, "Miss K. has buttons on her dress, just like Miss M." We then had another lesson about Miss K. The lesson was as follows:

Miss K— came to see us.
I like Miss K.
She had on a black dress.
On her dress was a bow.

(Continued on Page 97)

THE EXTENSION SERVICE OF THE ARTHUR SUNSHINE HOME AND NURSERY SCHOOL FOR THE BLIND

Mrs. Dorothy Snell Murphy

At the Twenty-fifth Anniversary Meeting of the Pennsylvania Association for the Blind held in February at Pittsburgh, I decided to answer the three questions I am most frequently asked about the Extension Service of the Arthur Sunshine Home and Nursery School for the Blind. Since this paper seems to cover adequately the work we have been doing, I shall quote from it here in order to clarify in the minds of the readers of the *Teachers Forum* the meaning of the term "Extension Service."

The questions are:

1. Whom do you class as a pre-school child?
2. What is the extension service?
3. How does it operate?

In the past one of two things usually happened to the pre-school, visually-handicapped child.

1. He was utterly neglected in his own home until he was placed entirely unprepared in a school for the blind, or
2. He was taken away from his home and family when an infant or very young child.

Teachers tell us that much, if not all, of the first school year is spent in breaking down bad habits and building up those good ones which the child should have acquired before the age of six years. Children have entered school as late as their tenth and eleventh years, and even at this age have been unable to care for themselves, and have been entirely unacquainted with the knowledge and constructive accomplishments ordinarily a normal part of pre-school life.

Under the second, or institutional plan, even if adequate pre-school training in every sense of the word had been given to these blind babies and young children, nevertheless, they were deprived of their rightful heritage of home life. Some children have been in nurseries for the blind for as much as five to nine years, sometimes never seeing their families in all that time; and then they have entered a residential school for the blind.

When such a child eventually enters his own home, what a frightfully hard adjustment there is for both family and child to make, and how sad for the child. No one knows what hunger and longing may be going on inside the childish heart, and what quirks of personality are thus being formed.

If, as is usually the case, the visually-handicapped child must spend his whole *school* life away from home, how much more important it is to keep him in his own family circle for the first five years. All workers for the blind have deplored the lack of training for pre-school children and have been anxious to do something on their behalf.

Miss Kathryn E. Maxfield has made an extensive study of this phase of work for the blind, and when appointed Director of the Arthur Sunshine Home and Nursery School for the Blind in Summit, N. J., resolved to make the Extension Service one of the first factors in her work of promoting the welfare of visually-handicapped pre-school children in America. Due to my years of experience in work for the blind, and in prevention of blindness, and of the many years spent in children's work, Miss Maxfield has asked me to take charge of developing this new program.

For practical reasons, we find it best to class as pre-school any children who have not yet attended school. We take them where we find them, so to speak, and then arrange for them (in cooperation with the agency in charge) whatever program seems

best suited to their age, mentality, and needs. The earlier a child is found and reported to us after his blindness occurs, the better the possibilities for his developmental training. One might say, "Why report a baby?" "What can one do in regard to developing an infant?" Probably for the baby who is less than four months old, little can be done, except in a physical way, but that is certainly very important as a foundation. However, during the first months, when little can be done for the baby's mental and social development, the Visiting Counselor can be working with the mother, taking her to visit schools for the blind, and making her acquainted with the wonderful spirit and accomplishments of adults and children without sight, becoming friendly with her, and in every way preparing her so that when the child does reach the age of four or five months, and is ready for guidance, the mother will be prepared.

Also it is very important to find these children early in order to develop in them proper habits before they have had time to form the bad ones which take so long to break down.

Now as to the question, what is the extension service? It is a new service on the part of our organization extending out into the homes of pre-school visually-handicapped children in any part of the country. Through this service small blind children will be trained at home largely through the education of the families.

As to the third question, what is the procedure? After being invited by a state or community to help in the development of this work, our first step is to confer with them, telling in detail of our plans and methods, ascertaining their desires as to any special procedure in their particular organization, or their opinions regarding the conduct of the work, and securing names of pre-school children from them and from others in their community recommended by them. If any other local workers for the blind, or other social agencies, have been interested in the child, a call is first made upon them to acquaint them with our purpose before the child is visited. A call is then made on the child. He and his environment are thoughtfully studied; encouragement and suggestions are given to the mother regarding the proper development and plans for her child. It is surprising how gladly this advice is received and how very much is usually accomplished on this first call.

A careful record is kept of all work done and the expense involved, and typed copies of the reports with notations and suggestions for each child, are mailed to all interested organizations. After having seen all the children on the list, we again confer with the authorities in charge, or the persons from whom we received the names, and together map out a plan for the future home guidance of these children in the way best suited to that particular child in terms of what is possible in that state or community.

Any child needing medical or social help is referred to the State, and by the State, to the proper organization. The same thing is done with those needing institutional care, as for the feeble minded or epileptic, and mothers with children of school age are urged to have them admitted as soon as possible. This is arranged by the Supervisor of the Extension Service, after getting permission from the State, or from whoever happened to be interested. We refer back to the agency and they in turn refer to other organizations as necessary. We keep in the background.

In order to demonstrate the usefulness of the work, we have assumed *all* financial responsibility, *thus far,* in New Jersey and Pennsylvania. Thanks to the cooperation of the Western Pennsylvania School and of Overbrook our expenses have been considerably lessened while working near Pittsburgh and Philadelphia.

Even if the cost were more, it would be wiser to keep the children in their homes, but as finances do have to be considered so much these days, the fact that the better

plan of pre-school training is also the cheaper, is a double blessing.

In Pennsylvania for the initial work (which is by far the most expensive, as it involves so many extra calls on agencies, etc., before actually seeing the child), the traveling expenses come to eight or nine dollars a day, an average of three children being seen per day.

In February, 26 children were under home guidance in Pennsylvania, and now this number has increased to 42. This extra work was made possible through the splendid cooperation of the Pennsylvania Association for the Blind and other local agencies. These children are being cared for by well qualified social workers in their own districts.

Miss Josephine Taylor, who has had charge of the 12 children on the home guidance list in New Jersey, had already obtained most gratifying results after only two and a half months' work. One of the most timid and dependent children I have ever seen, after receiving three visits a week for two and a half months, was placed in a kindergarten for seeing children in his own neighborhood. He is getting along wonderfully. A five year old child who was absolutely unable to walk, or even to stand, was able to do so with help, after only two weeks of work, and I could tell you of improvement in the case of each child on the list. In April the number of children under Miss Taylor's care had increased to 21, 6 of whom are seen only once a month.

To sum up: The Extension Service provides encouragement and guidance for mothers and children, so that the children may remain in their own homes and develop normally, keeping abreast, as nearly as possible, with seeing neighbors of their own age. Under this plan, a normal blind child at the age of six should be physically, socially, and mentally ready for admission in a school or special class for the blind. If the child is not normal, he should have every chance for development toward the highest goal possible for his mentality.

Thirteen members of the class taking the Harvard Course this year conducted jointly by Harvard University and Perkins, as well as two former members, are available for teaching positions in residential or day school classes for the blind for the school year 1935-36. All have passed the requirements of the course on the education of the blind and will have completed the Special Methods Course this spring.

The *Teacher of the Blind,* the official organ of the College of Teachers of the Blind in England, will become a monthly magazine after the close of the present volume. It will also appear under a new name, although its title has not, as yet, been chosen. In the future the magazine will contain articles dealing with items of interest to school teachers, home teachers, craft teachers, musicians and piano tuners. The new magazine will also include material dealing with the problems of employment.

The Spanish-American Association for the Blind, a year-old organization with headquarters at 103 West 103rd Street, New York, announces that its accomplishments already include a part in the establishment of two schools for the blind, one in Bolivia and the other in Costa Rica, and the founding of six scholarships for blind boys and girls of Spanish nationality. Free transportation on boats of the Cuban Steamship Company was arranged for these scholarship students in travelling to their schools. In addition, the establishment of a school for the blind will soon be undertaken at Caracas, Venezuela, by the government of that country.

The field of this organization is the broad one of all South America, Central America and Mexico, Puerto Rico, Cuba and Santo Domingo. The representatives in New York maintain contact with leaders in education of the blind in this country and are alert for appliances and methods which may be used with benefit for their people.

THE NEW YORK INSTITUTE FOR THE EDUCATION OF THE BLIND AND ITS PROGRAM FOR TRAINING OF TEACHERS

Editor's Note: Because of the increasing attention given by educators of the blind throughout the United States to the question of teacher training, the following information concerning the graduate Scholarships and Teaching Fellowships offered by the New York Institute for the Education of the Blind for the coming year has been printed in full. Application forms may be obtained from Dr. Merle E. Frampton, Principal, New York Institute for the Education of the Blind, 999 Pelham Parkway, New York, N. Y.

The New York Institute for the Education of the Blind is offering for the coming year a limited number of graduate scholarships and teaching fellowships for graduate students and teachers now in service who wish to continue their study programs in a combination of courses given at the New York Institute for the Education of the Blind and at Teachers College, Columbia University. These teaching fellowships are open to all teachers of the blind in public and private residential schools, sight conservation classes, workers with the blind and home teachers. Scholarship awards will be based solely on the merits of each case. Teachers in service without college degrees will be required to pursue a study program of subjects leading to the completion of the requirements for the baccalaureate degree.

Scholarship awards will include maintenance and cash stipends. The amount of stipend will vary with the individual case. Appointments are made for one year on a probational basis but may be cancelled at the end of any session in event of inferior work at the New York Institute for the Blind or at Columbia University.

Recipients are required to enroll for a full time program, which includes specific courses at Columbia University and proctorial and teaching responsibility at the New York Institute for the Blind.

A few special scholarships will be granted for the Summer Session of 1935 for which application must be made prior to June 1935.

Following are the suggested curricula for persons who are now engaged in or wish to prepare for the teaching of the blind or the visually handicapped as offered by Teachers College, Columbia University, in cooperation with the New York Institute for the Education of the Blind. Properly qualified students may pursue programs which will meet the New York State requirements for certification as teachers of the blind and the visually handicapped and the requirements of Teachers College for the degree of Master of Arts, or the degree of Bachelor of Science.

A. *Graduate Curriculum*

The normal program for the student who holds an acceptable baccalaureate degree will require one year of full time study, including eight points of work in observation, practice teaching, and practical courses at the New York Institute for the Education of the Blind, and twenty-four points of work in Teachers College.

In planning programs the previous work completed by the student, his particular professional objective, and his personal qualifications will determine the specific courses and the amount of work to be done in each field. The entire program of thirty-two points for the degree of Master of Arts will normally be distributed as follows:

(a) Required courses given by the New York Institute for the Education of the Blind:

History and technic of braille reading and writing

This is an intensive course dealing with the evolution of the types of finger reading, instruction in the technic of finger reading, and actual practice and teaching of braille.

Mr. Augustine J. Smith, Miss Madeleine Loomis, and members

of the faculty of the New York Institute for the Education of the Blind. 2 points.

Case work (course to be announced). 2 or 3 points.

History of the education of the blind

This course presents an historical study of the education of the blind from its beginning to the present, the social and industrial status of the blind, national and international movements, psychology of blindness, and philosophical and pedagogical points of view represented by different schools of thought, and the treatment of the larger problems of the visually handicapped.

Dr. M. E. Frampton and leaders of the blind. 2 points.

Special methods

This course is designed to run throughout the year. It is a laboratory course requiring 60 hours of work each session. The following fields will be covered: kindergarten methods, methods for grades 1 to 6, methods for grades 6 to 12, manual training and artisan crafts, music, physical education. Practice teaching is done under the supervision of regular teachers.

Mr. H. W. Wright, Assistant Principal of the New York Institute for the Education of the Blind, and members of the faculty of the New York Institute. 2 points.

(b) Required courses given by Teachers College:

Education 200F—Foundations of education. 8 points.

Education 207A (or *207A1,* or *208A,*)—Educational psychology. 2 points.

Education—Problems in the education of the blind and the visually handicapped. 2 points.

Survey of eye conditions

The purpose of this course is to present a comprehensive knowledge of the eye and eye conditions in such a way as to be of practical value to teachers in the field of the visually handicapped and other fields of welfare work. The course is also open to social workers, school nurses, and sight conservation class teachers.

(c) Elective courses given by Teachers College, chosen from the following in accordance with individual needs and with the approval of the adviser. 12 points.

Education 123MS—Supervision of sight saving classes. 2-4 points.

Education 124MT — Methods of Teaching Sight Conservation Classes. 2 points.

Education 251M-252M—Child development, child guidance, and family life education. 2-6 points.

Education 207E—Psychology of exceptional (sub-normal) children. 2-3 points.

Education 208E—Psychology of exceptional (gifted) children. 2-3 points.

Education 200MG — Orientation course in individual development and guidance. 1 or 2 points.

Education 200GA — The teacher's function in individual development and guidance. 2 points.

Education 249V—Vocational and educational guidance. 2 or 3 points.

Education 221A-222A — Fundamentals of measurements. 1 or 2 points.

Education 221M-222M—Mental and educational tests. 3-6 points.

Social Science 101-102—Introduction to sociology. 2-4 points.

Hygiene 172—Personal and general hygiene. 2 points.

Education 123A—Health service in schools. 2 points.

Physical Education 127-128—Health examinations and anthropometry. 2-4 points.

Methods of teaching or professional courses in a particular field, for example, English, French, mathematics, kindergarten education, elementary education, or secondary education. 3-6 points.

B. *Undergraduate Curriculum*

Applicants who have completed at least two years of college or professional work beyond the secondary school and have had at least two years of teaching or other appropriate professional experience may be admitted to a curriculum leading to the degree of Bachelor of Science. This curriculum will normally require from one to three years of full time study depending upon the nature of the work previously completed, and is designed to meet the New York State requirements for certification of teachers of the blind and the visually handicapped, and the requirements of Teachers College for the degree of Bachelor of Science. The entire program of the individual student, including work taken elsewhere prior to admission to Teachers College, must include the following:

(a) Courses amounting to not less than thirty points chosen from the following groups (including equivalent work completed elsewhere prior to admission):
  (1) English (two years of work or four courses required)
  (2) Modern foreign language (optional)
  (3) History, economics, sociology, political science, government, geography, social studies (two courses required, including at least one course in sociology)
  (4) Biology, physiology, anatomy, hygiene, physics, chemistry, botany, zoology, bacteriology, nutrition, physiography, geology, astronomy, general science, mathematics, general psychology (two courses required)
  (5) Fine arts, music, and industrial arts (optional)

(b) Courses amounting to not less than eighteen points chosen from the following groups (including equivalent work completed elsewhere prior to admission):
  (1) Educational psychology (two courses required)
  (2) History, philosophy, principles, and/or problems of education (two courses required)
  (3) Methods—general, special, observation and practice teaching, exclusive of (c)-(1) below (two courses required)

(c) Courses chosen with special reference to their contribution to preparation of teachers of the blind and the visually handicapped amounting to sixty points from the following groups (including equivalent work completed elsewhere prior to admission):
  (1) Observation, practice teaching, and practical courses (given at the New York Institute for the Education of the Blind) 8-16 points
  (2) Education — Problems in the education of the blind and the visually handicapped 2 points
  (3) Psychology of elementary school subjects, psychology of exceptional (sub-normal and gifted) children, child development, child guidance, and family life education, educational and vocational guidance, educational measurements, mental and educational tests, case work, hygiene and health education 12-30 points
  (4) Content and methods courses in a particular field of specialization, for example, kindergarten education, elementary education, teaching of English, teaching of French, teaching of science 14-38 points

The members of the committee now in charge of this program with Dr. Frampton are:

Dr. Esther Lloyd-Jones, Assistant Professor of Education, In Charge of the Guidance Laboratory; Dr. Rudolph Pintner, Professor of Psychology and Associate Professor of Education; Dean William Fletcher Russell, Professor of Education, all of Teachers College, Columbia.

A COURTESY WEEK PROJECT

NINA LOUISE WILSON

In residential schools for the blind particular attention must be paid to training young folks in the ways of courtesy. The blind child, because of both residential limits and visual handicap, has not as great an opportunity as has the seeing child to observe much in the way of outward courtesy. Since the children of residential schools live in such close daily contact with each other for long periods of time, their tendency is to become careless of many of the most common everyday manners. Too often in the world beyond the school walls blind people are the frequent recipients of much genuine courtesy and are scarcely gracious in return. Too often their manners are offensive to acquaintances and embarrassing to friends and relatives. Recently the Freshman English class at the Wisconsin School for the Blind became interested in the subject of courtesy through a study of it in connection with a unit of Social English, and, as a result, they planned and carried out a school-wide Courtesy Week Project.

Previous to Courtesy Week the class had spent some time in discussing various phases of the subject, and in doing some reading from Eichler's *A New Book of Etiquette*. The knowledge gained from this study, together with the fact that the eighth grade had some time before carried out a Better English Week program, gave the members of the class some confidence, and they became quite enthusiastic over the idea of educating their fellow schoolmates.

The plans for the week were two-fold: first, there were to be assembly programs each morning of the week; second, all English and Language classes were to devote the entire week to the study of courtesy. In the assembly each morning, the boy who had been chosen to act as master of ceremonies introduced the program. On Monday a member of the class gave a talk in which he explained the purpose of the week's activities, set forth the motto, "Think of the Other Fellow," pointed out the need for paying attention to this side of education, and gave some directions for the week. Folowing this, all members of the class assisted in dramatizing a number of correct forms for social introductions.

On Tuesday morning the Principal of the Janesville High School talked to the student body. On this morning, as on all succeeding ones, an honor roll was read; this was composed of the names of students who had been seen to do especially courteous deeds on the previous day. It was interesting to watch this list grow as the week progressed. Our Superintendent, Mr. F. M. Longanecker, talked the following morning. On Thursday a new member of the faculty, who had recently delighted this same audience with story of his European travels, talked on "Courtesy Abroad." Friday morning two members of the class read and answered the questions which had been dropped into their question box during the week.

In English classes most of the work for the week consisted of discussion of a list of courtesies which the freshman class had outlined. Of course the entire list involved many rules for performances which were far too hard for the little folks of the lower grades, but a graded list of courtesies, published last year in the *Wisconsin Teachers' Journal,* served as a guide through this difficulty. While the attempt was made to teach the children the proper thing to say or do on various occasions, stress was laid on the fuller meaning of courtesy: true courtesy does not consist of mere words and superficial acts, but rather is a sincere feeling of kindness and helpfulness toward everyone, regardless of rank or race. The motto, "Think of the Other Fellow," was selected by the class because it seemed to embody the really fundamental meaning of courtesy.

Toward the end of the week, after every child had been thinking about this matter for two or three days, assignments for written work were made and some very pleasing results obtained. From the intermediate grades there were stories, conversations, poems, elementary essays, lists of rules, etc. The four most advanced English classes participated in an essay contest, the subject for which was "Courtesy." Approximately fifty essays were turned in, and in them many interesting and original ideas were expressed. Prizes were offered for the two best essays, and several others were found worthy of honorable mention. About a week after the close of Courtesy Week, the names of the two prize winners and those receiving honorable mention were announced in morning exercises, and the winning essays were read aloud. Coming after a week of comparative silence regarding courtesy, this served to carry over the ideas beyond the week especially set aside for their consideration, and consequently acted as a reminder and review agent.

An activity of this kind offers varied opportunities for individual interests and abilities. In the English class which planned and guided the week's activities, all tasks for the work to be done were either self-chosen or class-elected, which increased enthusiasm and insured interest. Two boys who had gained their classmates' respect by their good work in oral composition were elected to act respectively as master of ceremonies and as introductory speaker. Two girls had become greatly interested in class demonstrations of social introductions and eagerly offered to arrange similar dramatizations for the assembly program. One boy who felt quite keenly his inferiority as a speaker or writer seized the opportunity to fix up the question box, which was placed in the front hall where it was accessible to boys and girls of all grades. Another boy who was far too shy to talk or perform before a large group wrote the letter to the Principal of the Janesville High School, requesting him to speak before the assembly. Another boy who enjoys publicity, but who lacks any particular ability in the field of English, collected the names each evening from the Look-out Committee, arranged the honor roll, and read it each morning. Every member of the class had an opportunity to appear on assembly programs, if only to take part in the dramatizations.

Besides these specific tasks, there was a great deal of valuable classroom discussion and cooperation. The discussion frequently became quite interesting as the members of the class evaluated ideas and expressed opinions which showed that they were thinking of more than their own personal interests or possible benefits. For instance, when the matter of the honor roll came up for discussion, someone suggested that there be a "Black List" instead of an "Honor Roll." Several objections were promptly made on the ground that it is better to call attention to the right thing than to the wrong.

The spirit of courtesy grew quite noticeably and rapidly during the week, but, as is always the case with such things, much of it has disappeared since. However, a gratifying amount of it has remained, and those who took the matter at all seriously have become better poised as a result. Although many pupils were a little skeptical at the beginning of the week, there were few who were not converted by the time it was over.

It was curious to observe the varied effects of this study on the different grades. In the third and fourth grades the instruction was received with the attitude of wanting to please and to be praised in return. Through the sixth and seventh grades there was, at first, open rebellion by the boys; their great cry was, "Only sissies do it!" By the end of the week most of them had been convinced that "Only gentlemen do it." In the eighth and ninth grades, where the boys and girls had reached the age of greater social consciousness, the interest was intense and enthusiastic. At the end of the English period every day such questions and exclamations as the following were heard:

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THE TALKING BOOK AND THE SHAKESPERIAN PLAY

Georgie Lee Abel

Recently, the Ninth Grade English Class of the Tennessee School for the Blind was fortunate in securing Talking Book Records for the play, "The Merchant of Venice." The teacher, believing that much poetry has been made more beautiful by excellent reading, was happy to discover that the reader of the play presents a splendid interpretation. The court scene was so intensely interesting that the children asked for a repetition of the scene after the play was finished.

Two weeks prior to the classroom study of the play, the braille books were moved from the library to the study hall. The boys and girls were told a few interesting facts about the play for the purpose of arousing their curiosity. It was suggested that since any classic is worth reading at least twice, there would be a greater pleasure in hearing the play if they had first read it themselves. They were also told that they would have the pleasure of hearing the Talking Book read the play. It is needless to say that they were delighted at the prospect of hearing the voice of a person other than their teacher. It is a well known fact that boys and girls in school always like a change.

Before the Talking Book could be brought to class, the proper background for the study of Shakespeare had to be constructed. Certain facts concerning the life of the author and the characteristics of the Elizabethan Age were brought to class and assimilated. As this was a beginning class in the study of Shakespeare, some time was devoted to the form of blank verse, and passages were read for examples.

Having read the play in braille, the children were then ready to hear it. It was necessary first, however, to regulate the volume and tone of the machine to the size of the room. The first scene was read aloud by the teacher. Attention was called to the mood of the characters and to other things which must be watched throughout the play. This was just a precaution to make sure that certain elements of the story would not be lost while the listeners became accustomed to the strange voice. Then the play was read in its entirety.

It took one week to finish the reading. This included certain questions which were asked at the beginning of each forty-minute period. The outside work was done on individual projects. These were making a good list of figures of speech, compiling notable quotations, presenting a favorite scene to the class.

Finally, the testing day came. The first test was a short one dealing with the characters. The reason for this was that the teacher had a secret fear that the spelling might be poorer than usual. The fact that the students do not see each word has been presented as an argument against the Talking Book. Perhaps spelling and punctuation would suffer if the students did not do a great deal of composition and a large amount of braille reading. There was no noticeable difference in the spelling in this particular case, because the pupils had been sufficiently aroused by the play to read it themselves. The second test was made up of questions concerning the structure of the plot, discussions of the contributions of the various characters to the play, and the interpretation of a number of quotations. The culmination of the study was a Shakespearian program made up of the individual projects. It is interesting that the students asked for certain scenes to be repeated.

The chief conclusion which the author draws from this study is that the Talking Book deserves to be considered as an additional item of equipment for the teaching of

literature. It is not even suggested that this instrument could take the place of the braille book, but it can help to increase interest in wide reading by a relaxed method. It also presents an opportunity for appreciation of good diction and for intelligent inflection, which the student does not get from silent reading. It certainly should stimulate more outside reading which can be done in a less cumbersome fashion. Perhaps, now and then, a classic could be read for pleasure rather than as a requirement.

It is sincerely hoped that more books from the high school reading list can be recorded. I believe that this machine is not only the greatest recent invention for the adult blind, but it is also a valuable addition to the classroom if it is wisely used.

(Continued from Page 87)

It was black and white.
I saw six buttons on the dress.
They were made of glass.
Miss K— is Bernice's teacher.

As the different teachers or nurses come to see us Agnes asks who they are and says, "Next time I will read about Miss ——," mentioning the name. Three of the supervisors came to see us at different times and Agnes asked to have stories about them. Each of them was proud of our little girl's reading lessons.

If you were to enter our classroom, you would see Agnes sitting in the first seat reading her lessons even better than a sighted child, for nothing distracts her attention.

We group the lessons of the same subjects together and Agnes makes her own selections of colored paper to be used for the covers.

In order to know whether she is merely memorizing the story or whether she knows the words, I play a game of flying in an aeroplane and landing on some field, which is some word on the paper. I do this by taking her hand, waving it from side to side, and making the sound of a plane, and then placing her fingers on a word. She tells the word and seems to get real pleasure from this game. If it is a new word she hesitates only an instant and gives the correct word. I also have some of the older pupils make the test.

This experiment shows what can be done with a blind child through patient labor and through making the reading lessons real and within the experience of the child.

(Continued from Page 95)

"Is that the bell already!" "Why, we just came!" "I just love this stuff!" "Will we have some more tomorrow?" These young folks felt that they were learning something that would be of immeasurable value to them. Being of that age at which girls want to attract boys, and boys want to impress girls, they were particularly interested in the rules regarding the etiquette at parties and dances and similar social functions—an interest which is altogether normal.

There are many other possibilities for a project on this subject. For example, plays and dialogues may be very effective and enriching. Courtesy plays are difficult to find, but perhaps this is just as well, for to be really effective a courtesy play should be constructed especially to suit the specific group or school where it is to be presented. The Courtesy Week Project outlined here is not at all original or unusual in any way, but the subject is one which should be an integral part of the education of every child, and especially of those blind children who are educated in residential schools and are away from home the greater part of their childhood.

The American Foundation for the Blind is now located in its new quarters at 15 West 16th Street, New York, N. Y. The slight delay in the publication of this issue is due to the conflict between the activity of moving and the preparation of copy, and necessary editorial work involved in its publication.

THE TEACHERS FORUM
for
Instructors of Blind Children

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The Editor will not be responsible for opinions expressed in signed articles.

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BETTER PROFESSIONAL SERVICE FOR TEACHERS OF CHILDREN WHO ARE BLIND

GEORGE F. MEYER

"What shall I teach?" and "How shall I teach it?" are the two questions that beset every inexperienced teacher. For an answer, she draws upon her experience of twelve years as a developing student, supplemented by the very specific training of the normal school. "The What" and "The How," or "The Content" and "The Method" are, of course, determined by the needs and capabilities of children who possess all their faculties, chief among which is the sense of sight.

From teachers thus trained to the use of visual methods, with varying degrees of experience, are chosen most of the teachers of our blind children. It is a distinct tribute to their interest, patience, and originality that they meet so courageously the problems which lack of vision present, yet few know of the mental anguish which many of these well-trained teachers undergo in groping for the proper procedures in teaching their blind charges arithmetic, geography, algebra, physics, and the like. Even the teacher of wide experience with the seeing must approach her first class of blind children with all the misgivings of an inexperienced teacher. She is fortunate if her superior has the time—even if he possesses the detailed knowledge necessary—for meeting each new teaching problem. She cannot gain specific guidance from a fellow teacher at the precise grade level, for seldom does a school have enough blind pupils to maintain two classes of the same grade. Printed material for her guidance is scattered and difficult to secure, or is completely lacking. The new teacher is virtually left to her own ingenuity in determining the easiest way for blind children to add, subtract, multiply, or divide; to draw a map, or to set up a graph.

To be sure, the problem would be a simple one, could we but realize the hope of some of our outstanding educators for a training school for teachers of the blind and a universal requirement that all teachers undergo specific training. While the plan for establishing a training school is meritorious, its acceptance by the schools that need it most is likely to be long delayed. We should, in the meantime, find ways and means for supplying to the teachers of the blind such detailed methods and techniques as educators, with less justification, have considered indispensable in the promotion of good teaching of sighted children.

The American Foundation for the Blind made an excellent beginning in this field through its educational research and its experimental school. With improved finances this service should be revived. The value of such extended treatises, as Miss Kathryn Maxfield's *The Blind Child and His Reading* cannot be overestimated. Pending such exhaustive study of other branches of the curriculum, shorter bulletins might well be issued giving specific methods to be applied in the teaching of given subjects. A bulletin on arithmetic, for example, would set forth effective methods of adding, subtracting, multiplying, and dividing; short cuts in interest computations; most desirable procedures in cancellation—all without use of pencil and paper, as blind people

must work. It would suggest means for laying out graphs, when and when not to rely on special aids—number boards, braille-writers, etc.—in short, such a bulletin should aim to meet such questions of method as are likely to arise in the mind of one unfamiliar with work for the blind.

While most of the papers presented before conferences are likely to be too general in scope for direct application in the classroom by the teacher herself, and are likely to find their greatest merit in establishing a certain point of view, such papers might well be summarized or the more valuable printed in full and included as a part of such subject or course bulletins. While most teachers are likely to read and profit from material that is assembled in a single bulletin, few will survive the discouraging prospect of having to look through several volumes of Proceedings in order to discover a few grains of inspiration or direct assistance.

It is true that Extension Courses maintained by normal schools and universities have not been too highly esteemed in their application to education. Doubtless this has been largely due to the fact that good class instructional facilities are now within easy access of every teacher who cares to avail herself of them. Excellent schools have, however, in recent years taken a more constructive attitude toward such courses and have admitted their place even in such difficult fields as "project teaching." The Extension Course could have definite possibilities in helping the teacher experienced with the sighted to relate her knowledge of teaching methods to the field of the blind and in relieving the uncertainty with which she confronts each new problem in her work with blind children.

If an outstanding teacher training institution could be persuaded to establish one or more appropriate extension courses, the professional stimulus for teachers of the blind would be far-reaching. The expense entailed would not be large considering the service rendered. The 1,200 or more teachers who serve our blind children represent the professional equivalent of a substantial and well-organized city public school system. Such a system would maintain, at no small cost, a supervisory force and a research department for a teaching staff that already has libraries of information available, that receives motivation and inspiration from frequent group contacts, whose leaders meet monthly or more often for educational discussions—a staff in which every teacher has by specific professional training and previous experience been exceptionally well prepared for her position.

When we consider that our classroom teachers of the blind seldom, if ever, meet in considerable numbers; that their leaders come together but once in two years; that they are virtually isolated from professional contacts in their immediate field; that they have little special literature of a strictly professional character; that their professional stimulus must be almost exclusively general rather than specific and for the solution of their immediate problems they must rely almost wholly upon their own ingenuity; and finally, when we realize that comparatively few of these teachers have by training and experience been especially prepared for their work, we begin to appreciate their greater need for this type of service.

I would not for a moment discount the need for and the value of broad, general training on the part of the teacher of blind children, nor can one doubt that some teachers will readily apply the underlying principles of more general professional courses in the solution of their teaching problems. To the teacher of unusual ability, material having to do with special methods for the blind would be exceedingly stimulating and suggestive. To the less competent teacher, such material would permit a more rapid adjustment and an unquestionable improvement in teaching results.

SUMMER SESSION COURSES AT GEORGE PEABODY COLLEGE FOR TEACHERS

After a temporary suspension for the past few years during the period of economic readjustment, the George Peabody College for Teachers, Nashville, Tennessee, has announced the resumption of its Special Courses for Teachers of the Blind for the summer of 1935. The session for this year will be held from June 10 to July 17. Full college credits in the courses pursued is granted on the same conditions as on other work in the college.

Special courses dealing primarily with problems of teaching blind children are open to those in attendance as well as certain recommended courses in the regular summer school curriculum.

The following instructors have been employed to take charge of the special classes dealing with the education of the blind: Mrs. Nannie M. Baker, Head of the Department of Manual Training for Girls, Tennessee School for the Blind; Mr. Neal F. Quimby, Director of Physical Education, Pennsylvania Institution for the Instruction of the Blind; Mrs. Alice Chatfield, in charge of the primary department, Ohio State School for the Blind; Miss Sarah V. Long, commercial teacher, Pennsylvania Institution for the Instruction of the Blind; Mr. Paul Luther McFerrin, Director of Piano and Organ, Tennessee School for the Blind; and Dr. P. C. Potts, Superintendent, Idaho School for the Blind.

The courses offered with assigned instructors are as follows:

S. B. 11 A, B, C. Manual Training—Handicraft. Mrs. Baker.

S. B. 112. Preventive and Corrective Physical Education. Mr. Quimby.

S. B. 113. A Program of Physical Education for the Blind. Mr. Quimby.

S. B. 211. Elementary Instruction in Piano and Organ for the Blind. Mr. McFerrin.

S. B. 212. General Commercial Subjects in Schools for the Blind. Miss Long.

S. B. 311. Educational Essentials in Schools for the Blind. Mr. Potts.

S. B. 312. General Problems of the Junior-Senior High School. Mr. Potts.

S. B. 313. Kindergarten-Primary Curriculum and Methods. Mrs. Chatfield.

S. B. 314. Elementary School Problems and Methods. Mrs. Chatfield.

S. B. 315. Music Braille. Mr. McFerrin.

S. B. 316. Special Vocational Training. Miss Long.

S. B. 411. Instructional Problems of the Junior-Senior High School. Mr. Potts.

Arrangements have been effected by which those in attendance at the summer school have the privilege of staying at the Tennessee School for the Blind. Full information concerning details of the course may be obtained from Superintendent I. S. Wampler, Tennessee School for the Blind, Nashville, Tennessee.

Our Contributors

Dr. Samuel P. Hayes is professor of psychology at Mount Holyoke College.

Dr. Edward E. Allen, our regular columnist, writes from his wide experience as head of different schools for the blind and as a student of methods used on both sides of the Atlantic.

Miss Anna Mahlenbrock, prepared for her career at Montclair Normal School and New York University, is in charge of the special class for the blind, A. Harry Moore School, Jersey City.

Mrs. Dorothy Snell Murphy is director of the extension work of the Arthur Sunshine Home and Nursery School for the Blind, Summit, New Jersey.

Miss Nina Louise Wilson, a graduate of Marietta College, is teaching English at the Wisconsin School for the Blind.

Miss Georgie Lee Abel is teacher of violin and English in the Tennessee School for the Blind.

Mr. George F. Meyer, Supervisor of Braille and Sight-Saving Classes in Minneapolis public schools, is widely known as an authority on the education of the blind.

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

Vol. VIII September, 1935 No. 1

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PRACTICAL HOME ECONOMICS IN SCHOOLS FOR THE BLIND

Clara Converse Hamblin

It is no longer necessary to advance arguments in favor of Home Economics in our schools. It is no longer a fad, and for this reason it should be the aim of every teacher of Home Economics to make her work just as practical as is possible for the girls with whom she is working. It may be true that what is practical for one may not be practical for another. However, in these days of uncertain financial condition, a teacher cannot go wrong if she makes the most of her opportunity to teach her girls to use the things which they have right at home and which otherwise would be thrown away as useless.

Such articles may be found in any residential school. They may be procured from cottages where sheets, pillow-cases, drapes, cushion covers and such have become too worn to be any longer of value to the cottage, and from various members of the faculty who are glad to turn over worn hose and other wearing apparel to the Home Economics Department, where they know it can be used to good advantage. Then, too, there are always interested church and club women who will be glad to give such articles to the Department. There really is no reason why the Department should not have the same type of "used" articles as any child will have in her own home. To me this is an important element in teaching our work in a practical way. For example, it would be useless to teach a girl only how to make use of a cast-off silk dress when we know that girl comes from surroundings where she would never have access to a silk dress. To be sure, teach the girl how to use such a dress, just in case that some day she may have one, but stress more particularly the use of worn cotton dresses.

Right here let me pause to make another point which I follow in my work. I never permit an article to be cut up into rug rags if it can be utilized in any way for wearing purposes. For instance, a pair of hose may be discarded by one person because of a short runner or small holes in the heels and yet such hose, if properly mended, may serve a girl a long time for school wear. A grown person's dress, especially a silk one can very frequently be made over into a child's dress. Then after such articles have served their second purpose they can very readily be converted into "carpet rags."

In the Oklahoma school all girls, from the little beginners to the last year high school girls, take sewing. The girls must have a good foundation in plain sewing during the time they are covering their elementary grade work. But in order that they may not become over-tired of "just sewing" day after day, they are afforded an opportunity to work in some related arts. Simple crochet is taught in the third and fourth grades and primary weaving is taught girls under the third grade. For both types of work very narrow carpet rags are used, narrower than those used by older girls. The selvage edge of sheets and old lace curtains are excellent for this purpose and may be dyed any desired color.

The more advanced girls who do plain weaving spend two or three class periods dyeing the good parts of worn sheets and pillow-cases various colors. These are then torn into strips and used for both weaving and crocheting attractive rugs. Old stockings make very attractive rugs, braided ones are most pleasing. For this type rug the whole stocking, except the toe and heel, is used. If the top of the stocking makes too large a braid, a strip on the lower side may be cut out, folding the raw edges under so that the finished rug may be smooth and attractive. If a broader braid is desired the stocking may be padded; that is, a strip of cloth, possibly an inch wide, may be

carried along the under part of the stocking, and the edges folded around the cloth so that it cannot be seen on either side of the rug.

Two types of crocheted rugs may be made of stockings. A thick rug may be made by cutting the stockings lengthwise, from one and one-half inches to two inches wide and using a large crochet hook. However, a more attractive rug is made by cutting the strips about one inch wide and cutting around the hose. A smaller hook is used and the strips are stretched as the worker crochets. These rugs lie flat on the floor and if some attention is paid to color arrangement they can be made quite attractive. Stockings and other rayon garments, dyed and cut lengthwise, may be woven, on any type loom, into lovely rugs, table runners, and covers for cedar chests or radio benches. I must not omit the use of stockings in making *hooked* rugs and footstool covers. Younger girls will enjoy making footstool covers without using any special design, mixing the shades of brown as they come; however, designs can be easily managed if a seeing person will work around the design with a long and short stitch or a plain running stitch, using carpet warp or heavy cord. The strips for this work should be cut lengthwise of the stocking and not more than one-half inch wide. The burlap foundation is stretched on to a frame and the work is done with a common crochet hook, holding the pattern side up and pulling the strips of stockings from the under side.

Most attractive and very durable bath mats have been made in our classroom from bed ticking. Some few years ago the mattresses in the various cottages were made over. The old blue and white ticking was saved and has been utilized in various ways in the sewing room. The younger girls made mattresses and pillows for doll beds, while the older girls cut it into strips about one-half inch wide and crocheted it into bath mats.

One type of rug which we have not yet made, but to me is the most attractive of all, is one either crocheted or braided, using the good parts of men's worn woolen suits.

In utilizing any old material the girls should be taught two very important things: first, the need for cleanliness—whatever garment is used must be thoroughly cleaned; second, that it is not economy to use any material which is worn to such an extent that it will pull out in a very short time.

Some knowledge of the use of flour, sugar, grain, and burlap sacks is very much worth while. Almost every housewife will use her flour and sugar sacks for tea towels, but one of our girls returned from her summer vacation last fall with a quilt which she had pieced together with material obtained from flour sacks. It was really quite attractive. She may have received her idea from an article read to her in class about a quilt given the wife of one of our recent presidents. The blue and white quilt had been made entirely from flour sacks, the blue, of course, having been dyed. In using sacks in this way much care should be taken that all of the sacks are of the same even weave.

Burlap sacks may be used for many purposes—attractive porch sets consisting of table mats and cushions may be made by working simple designs with various colored yarns or threads, using the plain running stitch. Heavy brown wrapping paper will guide the totally blind girl in working her design. Burlap can always be used as a foundation for hooked rugs and footstool covers, and in this day of the popular coarsely woven materials the better burlap sacks make very attractive skirts and jacket suits if they are properly bleached. Again crocheted or woven rugs can be made of burlap sacks, and again the dye pot will add to their attractiveness. Simply ravel the sacks and use four or five strands or threads together when crocheting or weaving.

I have already mentioned quilts. There are many valuable lessons to be learned from making them—patience and perseverance.

As a result the girl has "created" something "big," of which she may well be proud. Quilt making is popular everywhere and it pleases the blind girl that she can do the thing that everyone else is doing. She has used to good advantage many hours that might otherwise have been wasted, she has learned to use the scraps left from her print dresses, and above all she has learned to take small even stitches and to make uniform seams.

If in teaching blind girls to sew we are going to be practical in one thing we should be practical in all things. That is, the type of work we teach her to do and the methods we teach her to use must be just as practical as the material which she uses. For instance, it may be possible to teach a blind girl to embroider, provided a seeing person sits beside her and assists her while she works. But there is a doubt in my mind as to the advisability of taking the time and effort to teach a girl to do something which she will never be able to do alone. She will always have to be dependent upon another and soon she will become very unhappy and dissatisfied. It would be far better to use that same strength and energy to teach her to do something in which she can have some freedom and independence in doing after she has once learned how to do it.

The same theory of practical work should be carried out in the foods department. Every girl (and I am glad to say we are beginning to include the boys in this work) should know the principles governing healthful living for herself, her family, and her community. In order to live healthfully, a girl should know how to select, prepare, and use proper food and clothing. She should know something of the proper care of food and of proper sanitation methods.

Personally, I feel that it is a mistake to omit the teaching of foods in schools for the blind. It is a part of our job to make the blind girl, in so far as it is possible, feel that she is a normal girl. If a seeing girl should know how to live healthfully, why should we deny the blind girl that same knowledge? Aside from obtaining a certain knowledge of health habits, there are many things that a blind girl can learn to do in her mother's kitchen; and she should be given an opportunity to learn how to do them if she is to live a normal life.

In the foods laboratory, as in the sewing room, the girl should be taught to use the things that are in the average home. It would be foolish to equip our school laboratories with expensive electrical equipment, pressure cookers, etc., for these are the things that few of our girls will have in their own homes. However, some time during her school life she should have an opportunity to see these things and know something of their use. We must not permit our girls to become ignorant of the changes that are going on in the world. Their knowledge must be up to date.

In the same practical way we must teach our girls to use the food materials which they are most likely to have at home. For instance, it is not necessary to teach girls to make fancy salads from expensive food materials, but every girl should know how to combine certain common foods in salads. And she should know that such salads, especially if made from raw fruits or vegetables, are not luxuries but rather a very necessary part of her diet. She should also know why this is true.

In my work with blind girls I have found that many of them do not eat fruits or vegetables, even those grown in the average home garden. A good Domestic Science teacher will soon have each girl tasting these various things as they are served to her and having once tasted them, and knowing why they are good for her, she will soon learn to like them.

I have mentioned a few ways in which Home Economics can be made practical for the blind girl. There are many others if we but take time to ferret them out, and we, as teachers, must do it. We

(Continued on Page 17)

DOCTOR ALLEN SAYS:

THE ROYAL NORMAL COLLEGE AND PERKINS INSTITUTION.

On being asked: "How does the College compare with Perkins?" I replied somewhat as follows: "The two are comparable in being private residential schools established to fit blind people for diffusion in the world; are alike in their strict separation of the sexes even in school; and alike in making the most of out-of-class contacts between pupils and teachers—neither place shaping its general practices on those of the common schools, the College not upon those of any other agency for the blind, but being boldly independent and individual, has followed only what was attainably best for its pupils and their cause.

Again the two are comparable in realizing that the education of the blind is only half the job and that the other half is the education of the seeing public with respect to the trained blind.

Though the College is in a sense the child of Perkins, Sir Francis Campbell having established his principles under Dr. Howe at South Boston and put them in practice at Upper Norwood with the aid of Perkins teachers, yet the schools differ not merely in general scope and comprehensiveness but even in character of pupilage, in completeness of training, and persistent attempts to place the trainees in the world.

For while Perkins accepts the common run of pupils and usually rejects applicants over school age, the College admits only the really promising whatever their ages; while Perkins has a general high school course leading to graduation with diploma followed by special post-graduate classes for the few, the College substitutes for this early individual specialization with final certification for the many; that is, is mainly a training school, a normal school, and an academy of music. Further, and this is fundamental, the College admits pupils in most instances on scholarships tenable on merit; Perkins, not doing so, loses this extraordinary spur to pupil work and efficiency. The student of the College may be said both to deserve admittance and to earn his way year by year through sustained effort; whereas he of any American school, including Perkins, accepts pupilage as a right, and not seldom fails to put forth his best energies, and even too often loafs on the job, until confronted with approaching graduation or discharge. And yet quite a number go on to Conservatory, College, and professional school.

Perkins offers a good broad foundational course in several departments, including manual training for all, followed by some hand-work industry or shop work for most. The College, while insisting upon ample manual and technical training, conducts no industrial or handicraft department whatsoever. It aims higher—aims to fit its pupils for those few definite practical callings open to the blind that require no public augmentation wages. Perkins fits for the power to do many things which it does not specifically teach; and those graduating have given as good an account of themselves afterwards, and in a variety of occupations, including the professions, as those of any other non-selective school anywhere; but since of the two schools the College alone sends out none not of graduate calibre, no other school for the blind that I know of has furthered with commensurate success the cause of selective education for blind youth. And finally, Sir Francis Campbell's practice of preparing pupil after pupil for specific positions and even placing him in one—this, more than anything else, has sustained hope with many who, without a definite objective, would have fallen by the wayside, and has spurred them on to victory.

FINGER PAINTING AT PERKINS INSTITUTION

Janet H. Cairns

That education should open avenues of expression and that the fullest expression by children in any socially acceptable form should be encouraged are basic assumptions which are no longer questioned. Efforts are directed towards the creation of a drawing-out environment in which the capacity for self-expression may be developed. Under optimum conditions the modern child is given freedom to develop naturally and spontaneously.

Educators have pointed out that art provides one of the major outlets for spontaneous feeling. It is not necessary to dwell on the limitations in this field imposed on our children by their handicap. We may succeed in creating a drawing-out environment for them, but do we provide them with any medium for free, creative self-expression? Every child deserves the chance to realize the fullest development of his potentialities. The blind child should not be deprived of the opportunity to learn by artistic self-expression, and I think need not be, for teachers of art in modern schools maintain that it is the process of creation, not the product, which is vital and beneficial. The aim in teaching art is not to transmit technique and form but to draw creative talent from the children and to teach appreciation.

In Finger Painting lies a medium of self-expression which seems peculiarly well adapted to the needs of our blind children. A large sheet of paper, a can of jelly-like paint, and a dish of water constitute the materials with which the children work. Their own hands and fingers are their tools, precluding awkwardness of movement. They are invited to paint, given the materials, and allowed to smear the paint over the paper as they will. No instructions, no admonitions not to spill, no suggestions as to method or as to subjects are imposed upon them. Our kindergarten children here at Perkins have accepted this new medium of expression with enthusiasm. Having no preconceived standards against which they feel compelled to measure their capacities, they limit their activity to those elemental movements lying within the range of their powers. They exercise new powers of control, develop initiative, independence, and imagination, and they derive great satisfaction from the fact that their best efforts are rewarded with success. They love the feeling of the paint and the sounds that they can produce by squeezing their wet hands together and slapping the paper as they work, and they are never at a loss as to what they want to paint next. To observe them absorbed in their painting wipes out any doubts as to its immediate subjective value.

The benefits to be derived from Finger Painting are not limited, however, to its value measured in terms of the pleasure which it affords. Not only does it give our children new physical release, but it affords them a new mental outlook. It opens to them a field of which they have never thought or of which they have thought as one closed to them, thus broadening their horizon to a degree which cannot be measured. It offers a splendid opportunity for the discovery of gaps in their experience and training—for the detection of verbalism. The lacks and misconceptions reflected in the children's descriptions and explanations as they work are often startling.

Finger painting has definite objective educational possibilities. It provides for the development of both large and small muscles, for the child, as his mood suggests, applies the paint in great sweeping motions involving hand, arm, shoulder, and entire body, or perhaps with the fingers only, using sometimes one hand, sometimes the other, and often both together. The importance of finger-training in the education of the blind

cannot be over-emphasized. Manual dexterity can come only with good muscular coordination developed through use—a coordination of the muscles of arms, hands, and fingers which must be developed at an early age. However, the conventional materials designed for teaching manual dexterity to the blind child disregard accepted theory of muscle development compelling him to develop fine muscular coordination at an age at which the seeing child is still working with large muscles only. Finger painting brings into play *naturally* those muscles upon whose proper functioning manual efficiency will be dependent, but at the same time affords a definitely beneficial relaxation from the exacting tasks used in preparing little fingers for braille.

It seems possible that the energy producing the tension reflected in some blindisms may find outlet through finger painting, for the activity called for must be relaxed. Tight, jerky movements tear and wrinkle the paper. The children discover this independently and learn to relax unconsciously. They do not develop new tensions in conscious efforts to repress old mannerisms.

Finger painting may afford a key to the study of mental and emotional release experienced in the acquisition of physical self-mastery, to the recognition of the different types of mental imagery indulged in by our children, to an understanding of their conception of form and of their imaginative powers, and may in addition have a definite therapeutic value. This suggests that there may be values other than those of immediate benefit to the children. Many lines of investigation present themselves. We have been concerned to date, however, less with the possibilities of research than with the discovery of a medium through which our children might be given the opportunity to experience the thrills and satisfaction of true creative self-expression. We feel that finger painting constitutes this medium.

FOUNDATION LIBRARY

The Arrow, an official organ of the Boy Scouts Association in England, in its May-June, 1935, issue, carries an article called "Handicapped Boys Can Camp" by Dr. W. A. Murray, which discusses the problems met with in arranging Boy Scout camps for handicapped boys. The article points out how the various groups have overcome difficulties, and gives some general advice which may be useful. The same magazine carries an article called "Psychology of the Blind" by B. D. A. Best. The subject is here discussed as it applies to Boy Scout activities. It is pointed out that the blind boy should not be made unnecessarily conscious of his limitations while he is being enabled through scouting in particular to take his place in a sighted world.

"The Blind Student in the High School" by Meyer Lesowitz, is found in *High Points* for March, 1935. The writer of this article discusses his own experiences in the organization of a class of blind high school students in a New York City school. It is pointed out that although the blind constitute the smallest fraction of the student population, they form, nevertheless, a conspicuous element in the school body, and assume an importance disproportionate to their actual numbers.

The *Cosmopolitan Magazine* for March, 1935, contains an article called "Hearing Through Your Bones" by Zoë Beckley. The writer here touches upon the work being done with deaf-blind children at Perkins Institution, and the success attained at this school with the bone-conduction instrument.

The Vocational Division of the United States Office of Education published in July of this year a pamphlet dealing with the subject of vocational rehabilitation. The three phases of the subject taken up in this pamphlet were: "Training of Blind Persons to Operate Telephone Switchboards," "The Paolo Colosimo Institute for the Blind, Naples, Italy" and "A Census and Economic Survey of the Blind in California."

A STANDARDIZED SPANISH TEST FOR USE WITH BLIND PUPILS

B. F. Holland, Ph. D.

Because of the peculiar handicaps of blind pupils, standardized tests designed for seeing pupils are rarely suited for use with the blind without being changed. The directions for giving a particular test, as well as the method of recording the scores, have to be altered in almost every case; and for this reason, it is often necessary to establish a new set of norms. By making a few such changes in some standardized tests, however, it is possible to use the content or test items with very few alterations, and thus save time and expense in getting test materials ready for use with the blind.

This paper deals with an adaptation of the American Council Alpha Spanish Test for use with blind pupils and with a presentation of the results of the revised test applied to pupils in the Texas School for the Blind. The American Council Spanish Test was prepared by the Modern Foreign Language Study under the auspices of the American Council on Education and the Conference of Canadian Universities, and printed by the World Book Company. The adaptation was made by the writer and Mrs. Pauline Fertsch Eatman, 1933-34, and printed in braille by the American Printing House for the Blind. Arrangements for printing were made by Superintendent W. E. Allen and Principal R. F. Roebuck of the Texas School for the Blind.

The American Council Alpha Spanish Test in braille consists of Part I and Part II in separate booklets. Part I contains a vocabulary and a grammar test; Part II is a silent reading test. The composition test in the original form was not included in the revised test, because it involved the use of a picture. Other than this omission, the content is the same in the braille as in the printed test. The chief differences between the two tests are found in the directions for administering and in the numbering of the test items. For the benefit of anyone who may wish to give the braille test, the following directions for administering are offered.

General Directions

The total working time of each part of the test is as follows: vocabulary, 20 minutes; grammar, 25 minutes; silent reading, 38 minutes. The time for each test, it may be noted, is greater than that provided for seeing pupils. This extension of time is made necessary by the somewhat cumbersome methods of work employed by the blind. In preparing to give the tests, ample additional time should also be provided for distributing and collecting the booklets and for the pupils to answer the general questions at the beginning. It is important, further, that different persons giving the tests follow the same directions. Otherwise, it will be impossible to establish a reliable set of norms. As a means of standardizing the procedure, the directions that follow are offered.

Have the pupils seated at their typewriters ready for work, and distribute the test booklets, placing them right side up, one to each pupil, on the desk by the typewriter. Then say: "I am going to give you a new kind of examination in Spanish. It is contained in the booklet on the desk by the typewriter. Take your booklet and turn to page one. (Pause for the pupils to find the place.) Now read the directions near the top of the page, and begin answering the questions below them on the typewriter. Put the answer to each question on a different line, using single spaces. The first question is: What is your name? First name, initial, and last name? To answer this question write the number *one,* and your full name to the right of it. Then turn your spacer one space, and write the number *two* and the answer to the second

question to the right of this number. This answer is your age your last birthday. In the same manner, write the answers to all of the questions, and then wait for further directions."

PART I

Wait until each pupil has finished answering the personal questions, and say: "At the beginning of each test you will find directions explaining exactly how you are to give your answers. Read the directions carefully and notice how the sample questions are answered. The time allowed for the vocabulary test is 20 minutes and for the grammar test 25 minutes. You may not finish either of these tests within the time limit, but answer as many questions as you can in the time allowed.

"I shall notify you at the end of the given time, and even if you have not finished the vocabulary test, you are to stop immediately and go on to the grammar test. If you finish either test before the time is up, look back over the test and see if you can recall any errors you may have made. If you remember making a mistake, write the correct answer at the bottom of your sheet, showing plainly what you want the answer to be.

"Now turn to page three, read the directions at the top of the page, and begin answering them. Work as fast as you can, but do not hurry. Ask no questions about the test materials. If you do not understand, read the questions again. Ready, begin!"

At the end of exactly 20 minutes, say: "All stop work now on the vocabulary test and proceed at once with the grammar test on page twelve. Read the directions first. Begin."

At the end of 25 minutes, say, "Stop! Close your booklet and put with it the sheet in the typewriter."

PART II

The following directions assume that the pupils have taken Part I. If they have not, read the general directions presented above, and then begin with the directions below. Pass the booklets as before, placing them on the typewriter desk, right side up, one to each pupil. When ready to administer the test say, "The first few pages of this test are similar to those of the test you took previously. Answer the questions on these first pages as you did for the other test."

Allow reasonable time for answering the personal questions. Then say: "This is a test of your ability in silent reading. You will be allowed 38 minutes in which to complete the test. If you finish before time is up, look over the test and try to recall any errors you may have made, making your corrections at the bottom of your answer sheet, showing plainly what you want the answer to be.

"Now turn to page three, read the directions carefully, and proceed to answer them in English."

At the end of exactly 38 minutes, say: "Stop! Close your booklet and put the answer sheet with it."

DESCRIPTION OF DIFFERENT TESTS

The directions for each of the tests, to which the children are referred in the general directions above, are found in the tests proper. The directions for the vocabulary test are as follows: "One of the five English words or phrases in each line below is a correct translation of the Spanish word at the right of each number. Number each line on the typewriter, and write on the same line with the number the correct English word. Be sure to make your numbers correspond with the numbers in the test.

"Examples:

A. Alto old low high strong hot
To this question you would write the word *high.*

B. Cabeza cabbage gentleman horse head hair
To this question you would write the word *head.*"

Following these directions are one hundred Spanish words numbered in consecutive order with the five possible answers

at the right of each. The pupil reads each word and records his response on the typewriter.

Similar instructions are given for the grammar and silent reading tests. There are eighteen divisions in the grammar test, each of which is designated by letters from A to Q. Under these divisions are 50 test items numbering in consecutive order from 1 to 50. Separate directions are given for each of the eighteen divisions. The directions for division A, for example, are: "Number each question on the typewriter and on the same line with the number of the question, write the correct form of the definite article (el, la, lo, etc.).

1. Estudio——leccion.
2. Levanto——mano."

The silent reading test, published in a separate booklet, contains eight selections of increasing difficulty. Each selection is set off by a letter, as A, B, C, etc., and is followed by four or five questions on the content. There are thirty-six questions in all, which are numbered in consecutive order. The general directions should be given for this test, unless it is presented immediately following the vocabulary and grammar tests. When all three parts are given at one sitting, the general directions need not be repeated for the reading test.

Application of the Tests

The tests described above were administered to three classes in the Texas School for the Blind. The pupils in Class I had studied Spanish one semester; those in Class II, three semesters; and those in Class III, five semesters. The number of pupils in each class was as follows: Class I, 16; Class II, 13; Class III, 7. The tests were given by Mr. R. F. Roebuck in lieu of the final examinations in his courses. The main object of applying the tests to these classes was as follows: (1) to determine whether or not blind pupils can follow the directions without becoming confused; (2) to discover whether the method of recording the scores affects the size of the scores; (3) to test, as far as possible, the validity of the tests; and (4) to compare the scores made by blind pupils on the braille tests with those made by seeing pupils on the original tests.

Results and Interpretation

Regarding the ability of blind pupils to follow the directions for administering the tests, Mr. Roebuck reported that very few pupils met with serious difficulties. About half of the pupils failed to complete the tests in the time allowed, but an examination of the records of these pupils revealed that their scores would not have been increased had they finished. Since the test items are arranged in the order of increasing difficulty, the pupils had time to attempt as many items as they were capable of getting right. As indicated above, the time for each test is greater than that for the original pupils, for the reason that the blind pupil is forced to move his hands back and forth from the test material to the typewriter, a procedure that is more cumbersome and slower than that followed by seeing persons in reading and recording responses.

The possible effect of typing on the size of the test scores was studied by correlating the pupil's grades in typing with their scores on the Spanish tests. The coefficients for the various classes are as follows:

Class I	.254
Class II	.021
Class III	—.271

Since all of the coefficients are low and one is negative, it appears that there is little relation between ability in Spanish and in typing. At least, there is a lack of correspondence between the scores representing these abilities. This fact implies that the method chosen for recording the scores is simple enough not to interfere with the size of the scores on the test, which is an important consideration in test construction.

One method of determining the validity of the tests was to determine to what extent the scores on the Spanish tests cor-

relate with the grades made by the pupils on their work in Spanish. In grading the pupils, the instructor took into consideration the three types of achievement measured by the Spanish tests, vocabulary, grammar, and reading, and gave each pupil a semester grade. The extent of agreement between these grades and the scores made on the three Spanish tests combined is indicated by the following coefficients:

Class I	.92
Class II	.90
Class III	.50

These data indicate a very high degree of correspondence between Spanish grades and test scores, especially in Classes I and II. This means that the ranks in the two abilities are approximately the same. Though there is a medium degree of correspondence shown for Class III, the coefficient is a positive one. Whether the lack of correspondence was due to the nature of the test or to the fault of the grader is uncertain, but the grader readily admitted that he was less certain of his accuracy for Class III than for Class I and II. It may be a matter of interest in passing to state that the grades were computed from various tests given during the semester and that they were made up and recorded as used before the standardized Spanish test was given. After seeing the scores on the latter tests, Mr. Roebuck, the grader, readily accepted them as highly indicative of the abilities of his pupils.

To get another estimate of the validity of the Spanish tests, two simple verb tests were given each class. One of these was a request of the pupils to write down as many regular verbs as possible in five minutes. The other was a request to conjugate in the present indicative as many irregular verbs as possible in ten minutes. The score on the regular verb test was the number of verbs given correctly; that on the irregular verb test was the number of verb forms given correctly. The coefficients of correlation between these scores and the scores on the American Council test were as follows:

	Regular Verb vs. Test Score	Irregular Verb vs. Test Score
Class I	.91	.89
Class II	.53	.60
Class III	.20	.60

From these data it may be seen that the pupils perform in relatively the same manner on the different types of tests, except Class III. This variation from the general tendency could be due to the small number of cases in Class III. The close correspondence here and that with the instructor's grades pointed out above indicates that the American Council test, as adapted for use with the blind, is a fairly valid measure of blind pupils' ability in Spanish.

Attention may now be called to the actual test scores made by the different Spanish classes and to the manner in which these scores correspond with the norms for seeing children. The norms were taken from the Manual of Directions published in connection with the original test.

The measures of greatest significance for our purpose here are quartiles and averages for each test. These are presented in Table I for both the seeing and the blind pupil in each class.

From a study of the averages shown in Table I, it may be seen that in general the blind pupils made lower scores than the seeing. This is particularly true in the case of the first-year pupils designated as Class I. This class, it may be seen, made markedly lower averages than the seeing on each of the three tests. On the vocabulary test, the mean for the blind pupils, for instance, is 15.6 and the norm is 22.0, which difference amounts to about 7%. On the grammar test the mean for the blind is 7.2 and that for the seeing is 9.9. This difference of three points is approximately 5½%. The mean for the blind on the reading test is 4.1 and the norm is 5.0. Thus the first-

TABLE I

QUARTILES AND MEAN SCORES MADE BY SEEING AND BLIND PUPILS ON SPANISH TEST

	Class I			Class II			Class III		
	Q1	Mean	Q3	Q1	Mean	Q3	Q1	Mean	Q3
Vocabulary									
Seeing:	17.0	22.0	30.8	31.1	37.0	44.0	41.9	55.0	58.5
Blind:	10.8	15.8	20.0	25.2	35.5	46.1	50.2	53.4	58.4
Grammar									
Seeing:	6.8	9.9	13.6	12.1	16.0	22.9	18.9	23.0	30.1
Blind:	4.5	7.2	9.0	10.5	18.0	19.5	21.7	28.1	35.5
Reading									
Seeing:	3.3	5.0	10.3	10.7	13.0	19.2	15.8	19.0	23.9
Blind:	2.3	4.1	5.3	6.2	10.3	14.7	13.4	17.0	20.6

year Spanish pupils among the blind exhibit achievement in this subject considerably below the norms for seeing pupils.

A study of the data for the second- and third-year pupils reveals a closer approach to the norms by the blind pupils. In several cases, in fact, the norms are exceeded by the blind.

When all of the data in Table I are considered as a whole, the facts indicated by the averages are further emphasized. It may be seen in the data for the vocabulary test, for instance, that Q3 for the normal group is 30.8, or at a point more than four units above the highest score made by any of the blind pupils. Q1, on the other hand, is higher than the mean for the blind, Q1 being more than six points lower. These positions of the Q's indicate that the entire distribution of the scores for the blind is clustered about the lower end of the scale. A group of similar comparisons of scores on the grammar and reading tests will show that Class I made a relatively poor showing on each of these tests. There seems to be some factor, or group of factors, therefore, that inhibits the achievements of Spanish by first-year blind pupils.

Mr. Roebuck, judging from his experience as a teacher of Spanish, thinks that the retardation of the first-year pupils is not due to their inability to learn the subject nor to the kind of instruction given during the first year; he thinks that it is due to the mechanics of braille Spanish and to the scarcity of materials in braille. At the outset in teaching Spanish, for example, the children have to learn numerous accents and other special markings of letters and words, and they have to deal with full spelling. These "extras" are apparently more difficult for blind than for seeing pupils, and thus tend to retard progress in the types of achievement measured by the tests. Moreover, it is difficult to secure materials in Spanish printed in braille, the children being restrained largely to their text books for practice in dealing with the materials. This factor doubtless accounts in part also for the retardation of first-year pupils.

A study of the data for Class II in Table I will reveal that the pupils in this class made scores on the tests approximately equal to the norms. The mean for the vocabulary test is within two points of the norm, and the mean for the grammar test is two points higher than the norm. The mean for the reading test, however, is nearly three points lower than the norm. The Q's indicate a similar tendency, namely, that the distribution of scores as a whole compares rather favorably with the distribution of the scores of seeing pupils. Class III, in like manner, shows nearly equal scores to the norms for the vocabulary and grammar tests, but a lower mean than the norm for reading. Hence, it may be seen that by the time blind children reach the end of their second year of Spanish they

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WHY BE POLITE?

Samuel P. Hayes, Ph. D.

Editor's Note: Schools planning a "courtesy week" as suggested in Miss Wilson's article in the Forum for May, 1935, may wish to use this Chapel Talk for the basis of a talk in one of their first assemblies.

Probably you have often been told that you must be polite. A scout is courteous; polite children are complimented while rudeness and clumsiness are condemned. Perhaps you have wondered why grown-ups are so insistent about it. Various reasons are given in this paper with the hope that if you realize the importance of politeness as adults do, there will be little question of your accepting their advice.

Courtesy is an old word which takes us back to the days of chivalry. When kings and queens invited people to visit them, or to come and see them, they held court, a formal reception perhaps followed by a banquet or a ball. The guests dressed themselves in their best clothes and put on their company manners, for in court one must be courteous; one must act and speak as royalty and the nobility do, even though this behavior might be very different from one's every-day manners. Of course many old customs have changed with the years, but even now when Americans are presented to a king or queen, the most exact rules are laid down for their dress and speech.

Courtesy, then, once meant the way one must act in court; in our modern democracies it has come to mean what the best people do. In America we do not have to wait for royalty and nobility to give parties, but in some of our own we expect as rigid observance of the rules of dress and speech as in any formal European court. Think how embarrassing it is for a girl to find that she has not worn the correct clothes to an evening affair! And any man who wears brown shoes with a dress suit not only shows his own ignorance but may be accused of casting discredit upon his host. Even minor matters become important, as for instance the rule that when wearing a dress suit, the bow of the necktie must be outside of the wings of the collar. In speech we find similar restrictions. Men must refrain from using rough talk of the streets, and must make themselves both agreeable and inconspicuous.

Politeness is quite as important in business as it is in society. How carefully telephone operators are trained! No matter what may be said to them, they are never free to become pert or rude. Behind the counter in the store, a clerk must learn to take the position that "the customer is always right"; an indignant girl may lose her job if she answers an angry customer with hot words. In travel the greatest effort is made to extend to passengers every possible courtesy; a genial conductor is a valuable asset to any railroad; on shipboard the stewards are as considerate and polite as the captain. Doubtless in another generation the courtesy of the traffic policemen in the large cities will spread to the officers in the smallest towns!

In the professions it is taken for granted that everyone will be a gentleman in dress, in speech and in action. We may perhaps excuse a brusque surgeon if he is skilful enough to be much in demand, but the general practitioner must be courteous; lawyers sometimes overstep the bounds of courtesy when arguing in the courtroom, but the lawyer in his office is expected to be as kindly and polite as a minister or a professor. Tradition and custom, then, lay down many rules of behavior, and anyone who is not courteous may easily be accused of a grave social misdemeanor.

As a second reason for being courteous, we may say that politeness is an indication of our success in the process of growing up. Shortly after a baby is born we begin to socialize it, to make it acceptable to others.

During the early months we expect an infant to seek mainly its own selfish satisfactions, but as it must live as a member of a group we begin almost at once to soften and correct its jungle behavior and to mold it into a pleasing human being. Willingness to wait, generosity, pleasant facial expressions, modulations of the voice—whatever will make the baby more like the elders of the group and remove the friction of its rawness and selfishness—these and dozens of other changes we constantly seek to establish by example and precept. And how difficult it often is for the child and for his teachers! Many a small child goes through a tremendous struggle when asked to shake hands with a stranger, or to say "thank you." But through eternal vigilance and patience we gradually socialize most children so that they come gradually to think less of self and more of the rights and comforts of those about them.

As the child grows older we seek to induce him to restrict his rough play and his loud speech to the out-of-doors; in the home and in the school we teach him etiquette. Someone has said that you may make your way all round the world with the single polite French phrase, "S'il vous plait." Certainly politeness will carry us far. And just as courtesy is a sign of social maturing in the individual, so we find that among nations, the people of the older civilizations tend to be more polite. Think of the formal speech and behavior of the Spanish and the French, and still more of the elaborate politeness of the Chinese! In America we find the higher levels of politeness in those parts of the country where European traditions were introduced at a very early period. Old Virginia has often been cited as a center of courtesy, and the chivalrous southern gentleman is an accepted American type.

A third reason for politeness is the unsatisfactory nature of other forms of response. During the awkward age of the early teens, when the rapidly lengthening arms and legs are always in the way, and the clumsy, impetuous boy or girl is constantly ridiculed for social errors, it is very hard to think of others rather than of oneself. The boy who has frequently been told that "he can never open his mouth without putting his foot in it" may find it difficult to continue frank debates with father or older brother and, in self-defense, he may adopt the method of playing safe by silence. Instead of frankness, supported by the belief that if he is honest and straightforward he will be socially acceptable in spite of his mistakes, he may cringe under the sarcasm that is so painful to him, withdraw into himself and play the wise owl. In every college class we have some students who have been so grievously hurt by criticism that they dare not volunteer in class discussion. But the safety of silence is dearly won. When a girl plays safe, some people may credit her with wisdom, but many will give her the epithet of "dumb Dora" and condemn her to the undesirable position of a "wall flower."

Some young people meet the difficulty by the opposite plan of bravado. They seek to cover up their feelings of insecurity by aggressive behavior and blustering, loud speech. Just as animals swell up to prevent attack, so boys strut and "talk big" to avoid physical encounter. They may even resort to swearing to cover up their fear. But this device gives only temporary success, as it is so easily understood, and the ultimate fall is in direct proportion to the magnitude of the pretensions. Playing safe and bravado are both common substitutes for politeness but neither method gives a satisfactory solution to the difficulty. They are the methods of weakness; the strong meet their issues frankly, sincerely and courteously.

Finally, consider that courtesy is the path to success. It *pays* to be polite. The substitutes are anti-social and make enemies, while courtesy makes friends. As the Bible says, "A soft answer turneth away wrath." How easy it is to answer in kind when a person

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SUMMER COURSES FOR TEACHERS OF THE BLIND

P. C. Potts, Ph.D.

Fifteen years ago, Mr. I. S. Wampler, superintendent of the Tennessee School, took a very progressive step in the education of the blind. He arranged with Dr. Bruce R. Payne, president of George Peabody College for Teachers, at Nashville, to have special courses offered for teachers of the blind. The response to this idea was not so enthusiastic as was to be expected, and the attendance was not so large as it should have been but justified the offering of such courses for seven consecutive summers. Dr. Edward E. Allen was very helpful in planning the work, and sent two or three of his most experienced teachers to offer courses during the first few years. Dr. O. H. Burritt and Dr. E. M. Van Cleve were also interested and sent one or more of their teachers. Nevertheless, too much of the burden for the success of this venture continued to rest upon Mr. Wampler and the teachers of the Tennessee School, and the special courses were discontinued from 1928 to 1930. They were then offered again in 1931, and with the added financial assistance of the American Foundation for the Blind, have been resumed during the past summer.

It seems an anomaly that when there are thousands upon thousands of public school and college teachers attending school every summer, and when practically every subject under the sun is being taught, there should not be sufficient demand for special courses in teaching the blind to justify offering them every summer in even one school in the whole United States. Of course, many of our teachers go to summer schools, but it has not been considered absolutely necessary for them to have special education either before they begin to teach or afterwards, and they get along with general preparation for teaching and actual experience in the classroom. Such preparation is no longer deemed adequate for teaching in other fields, or for other professions. We cannot expect our work to be rated very highly until we demand adequate training for everyone engaging in it. Therefore, we should all help to make the education of the blind a profession by encouraging our teachers to obtain special training. This should be required of beginning teachers, and teachers in service should receive bonuses or increases in salary for such work. I believe that the teachers themselves would welcome such opportunities if they could afford to take advantage of them. It is accordingly incumbent upon their superintendents not only to require such preparation but to reward them for obtaining it.

During the past summer twenty teachers of the blind were benefited by the special courses offered by George Peabody College for Teachers. Sixteen of these were students only, during the summer, the others were instructors and students. In addition to the facilities of the Peabody library, they had access to a wealth of material at the School for the Blind, many books and pamphlets sent by the American Foundation for the Blind and others furnished by the instructors themselves. Most of the students stayed at the Tennessee School and were taken to the College and brought back each day on the school bus. Thus, in addition to their regularly assigned work, they profited from associating with each other and with their instructors out of class. Mr. and Mrs. Wampler took pains to make living conditions as home-like as possible. The special courses were given during the first six weeks' summer session and the weather was comfortable most of the time. Many pleasant evenings were spent on the porch or under the beautiful trees on the campus, and an occasional game of bridge made an interesting diversion. Several trips were made to "the lodge" a few miles from town, where a delightful picnic was held on the Fourth of July.

Owing to the small number of special

students, only five of the courses contemplated were offered. Mrs. Alice Chatfield, who for a number of years has had charge of the primary department in the Ohio State School for the Blind, gave a very interesting course in "Elementary School Problems and Methods." Her approach to this field was quite scientific and her ideas very progressive. Mr. Scarberry is to be congratulated upon having such a wide-awake and up-to-date teacher on his staff. Mr. Neal F. Quimby, who has been director of physical education at Overbrook since 1929, labeled his course "A Program of Physical Education for the Blind," which included some material on preventive and corrective physical education, in which he has done outstanding work. He used demonstrations, and photographs showing results which he has attained, in addition to lectures, discussions, assigned reading and reports. A third course was offered by Mrs. Nannie M. Baker, who has been head of the department of manual training for girls at the Tennessee School for a number of years. The work covered included methods in teaching hand and machine sewing, crocheting, knitting and basketry. This course has been given a number of times and there always seems to be a demand for it. The other two courses were offered by the writer, superintendent of the Idaho State School for the Deaf and the Blind. The one, "Problems of the Junior-Senior High School Department in Schools for the Blind," included as much as possible of the material planned for two closely related courses. All of the students in this class were college graduates and were prepared to do advanced work. The other course, "Educational Essentials in Schools for the Blind," was based upon the outline given in an excellent paper presented by Dr. O. H. Burritt, at the A. A. I. B. convention in St. Louis, in 1934. Many of the problems suggested have to be solved primarily by administrators and supervisors, but since most of the students were undergraduates and elementary teachers the course was made as practical as possible. A great deal of interest was manifested in this course, thirteen pupils registering for it, and they all seemed to feel that it gave them a broader view of the education of the blind and that it was well worth while for any teachers in our schools. The first of these two courses was listed as a graduate course, and the second one was accepted for graduate credit for graduate students who did extra work.

It is not known whether or not such special courses will be offered next summer. Although it was possible to offer a few courses for as few as sixteen pupils, yet twelve of these were from the Tennessee School and the same teachers cannot be expected to attend school every summer. The others were from Kentucky, New Mexico, Arizona, and Idaho; and the two instructors from Pennsylvania and Ohio increased the number of states represented to seven. The expenses were quite reasonable—eight dollars per week for a single room, board and laundry; and eight dollars for each course carrying two hours' credit. In addition to the special courses, many other courses in education and psychology were available. Most of the students took some of these other courses, and Mrs. Chatfield, Mr. Quimby and the writer also took one or two courses at either Peabody or Scarritt College. There were various other educational opportunities, notably, a course of ten lectures by renowned speakers at Vanderbilt University, a two-day series of lectures and discussions on "The New Education," and a three-day Conference of School Administrators of the Southeast. Several of us spent two days at the A. A. W. B. convention, in Louisville.

Many delightful social affairs were sponsored by the College, and tours were arranged to the Hermitage (Andrew Jackson's birthplace); Mammoth Cave, Hodgenville (Lincoln's birthplace); Bardstown (where "My Old Kentucky Home" was

written); Murfreesboro, Chattanooga, Chickamauga and Lookout Mountain; Muscle Shoals; the Great Smoky Mountains National Park; and even Washington, Arlington, and Mount Vernon. Many classes did not meet on Friday and these trips were arranged for various week-ends.

Anyone going to Peabody for either or both of the six weeks' summer sessions will have a delightful and profitable educational opportunity. It is to be hoped that the demand for special education on the part of our teachers, and by superintendents for their teachers will be so great every summer hereafter that such courses will be offered not only at George Peabody College for Teachers, but at some other college or university in the west. When all of our teachers are special teachers and receive the salaries of special teachers, we shall be well on the road towards having the education of the blind looked upon as a profession.

NOTICE

In our laboratory nursery school for the blind we are making a study of the language problems of visually-handicapped children under seven years of age. Just at present we are trying to find answers to the following questions:

1. How adequate is the pre-school blind child's vocabulary development for his satisfactory social and academic adjustment during his first years in a school for the blind?

   (a) Is his vocabulary, both total and used, comparable in quantity to that of seeing children of the same age?

   (b) Does he have sufficient knowledge of the meanings of words which relate to the interests and experiences of kindergarten and first grade children so that he is able to build on them other meanings and experiences, in school hours and out?

2. What can we learn about the special language disabilities and training needs of blind and educationally blind children through the study of their development of formal language?

3. What can we learn of the language disabilities and training needs of these children through a study of their oral stories, both free and directed, and of their conversation?

Further, we are interested in obtaining information with regard to the most effective stimuli for initiating speech in small blind children who are retarded in language development yet who give other indications of being mentally normal. Our experience indicates that a blind baby who has been left to vegetate until he is fifteen or eighteen months old has no interest in anything outside of himself and resents attempts to arouse him to constructive activity. This seems to be especially true in the case of language. I should appreciate hearing from anyone who can tell me of similar work that is being done elsewhere, in order that we may profit, in our study, from the experience of others.

MISS KATHRYN E. MAXFIELD,
Director Arthur Sunshine Home and Nursery School for the Blind, Summit, New Jersey.

(*Continued from Page* 4)

must put our work within reach of our girls, so that they will feel they have a knowledge which will be of real value to them. When we have done this we have done much toward fulfilling our duty, that is, of making it possible for our girls to live a fuller and richer life regardless of where or under what economic circumstances that life is lived.

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seem to overcome the handicaps of the first year, except in reading.

The weakness of blind pupils in reading is likely due to the lack of practice in reading Spanish, which lack is due, in turn, to the scarcity of material in Spanish printed in braille. Other than the text books, it is difficult to secure anything suitable for reading, especially for first- and second-year pupils. This handicap is one that could be overcome, of course, if a sufficient number of schools were interested in teaching Spanish to justify the publication of additional material. At the present time not many schools for the blind include Spanish in the high school curriculum.

Conclusion

On account of the limited number of subjects used in this study, no effort will be made to state definitely proved findings. From the data at hand, however, the following hypotheses may be proposed: (1) Achievement tests used with seeing pupils can be used with the blind by (a) altering the directions for administering, (b) changing the method of recording the scores, (c) extracting test items that definitely require vision, and (d) establishing a new set of norms; (2) recording the scores on a typewriter does not seem to affect the size of the scores; (3) blind pupils achieve Spanish vocabulary and grammar approximately as well as seeing pupils, except in the first year; (4) blind pupils are generally deficient in the reading of Spanish.

From the practical standpoint, this study indicates: (1) the practicability of the use of standardized tests in different school subjects; and (2) the need for additional material in Spanish printed in braille.

The American Council Spanish Alpha Test in braille can be secured from the Texas School for the Blind. The authors invite others to use the test, to criticize the procedure outlined in the above article, and to send in scores secured by the test.

(Continued from Page 14)

threatens to strike! But who can hit a smiling boy? Politeness arouses kindly feelings and predisposes people to treat us well. Of course it may be abused and employed for ignoble ends. By obsequiousness and flattery one may debase politeness and deceive the unwary to their great harm. But the essence of real courtesy is kindness, and its aim is social rather then selfish. It is not a shallow form, although the formal side is often more obvious than the inner motives. A truly courteous person seeks to set others at ease, and to that extent he lays them under obligation. As a habit, courtesy is one of the great virtues, but it is a virtue which should not be put on and taken off according to where one is. It is often said that to know a man you must see him in his home. It is so much easier for many people to be courteous to strangers than to be polite to their parents, brothers and sisters! The habit of courtesy should be constantly in operation, and if one is truly courteous it would be as difficult to be impolite to anyone as it would be to change one's method of handwriting.

In summary, we have at least four good reasons for being polite: It is an ancient trait honored by the best people; it shows that we are growing up and have conquered our early self-consciousness; the substitutes for courtesy are anti-social, and turn people away from us; courtesy is the path to success in life.

It has often been said that "Love makes the world go 'round." May we not quite as truly say that courtesy oils the wheels on which the world turns? Without it, friction in the home makes home life unbearable, friction in school life makes that a dreaded nightmare, and friction in business and social life causes early failure. At first courtesy seems to sacrifice the ego by subordinating the self to the group, but ultimately it brings us our greatest ego satisfactions, for it is the courteous man who is sought by all, whose praises are sung even by his contemporaries, who leaves sweet memories behind.

THE TEACHERS FORUM
for
Instructors of Blind Children

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The Editor will not be responsible for opinions expressed in signed articles.

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THE PURPOSE OF EDUCATION

The opinion is now and then expressed that unless gainful occupations can be found for the blind it would be better not to emphasize their educational programs, one person going so far as to say that education without occupation is useless. Perhaps such statements are made only with a view of emphaizing the need of greater efforts in securing gainful occupations for the blind and not as stating the absolute truth.

Of course, it must be admitted that good, wholesome work is an essential condition of abundant life; and it is agreed that no effort should be spared to help the blind achieve something of self-realization through the ministry of work,

"Work that springs from the heart's desire,
Setting the brain and soul on fire."

However, educators of the blind must not lose faith in the holy ministry of education, a ministry that is capable of doing much to help the blind go the way of the "good, the beautiful, and the entire."

That the blind find great difficulty getting into gainful occupations should not lessen the efforts that are being made to educate the blind, *though it might suggest changes in the educational programs. Rather a more intensive educational program should be the result.* The educational program should be broadened and deepened, until the doors of self-realization and self-revelation are opened up to all the possibilities of individual life and action. It is Lessing, the German philosopher, who tells us that education is revelation coming to the individual.

Even though hopes fall and ambitions are not realized, even though the prospects of honor and well-being vanish, yet it must be agreed that the educated blind man is better able to do his duty than the uneducated blind man. It must not be forgotten that the blind man, as well as the seeing man, needs "light, grandeur, freedom, immortality" and that education is, at least, one of the means by which he may secure these. Whether toiling outwardly, or not, for the lowest of man's wants, he should be able to toil inwardly for the highest.

The question of occupations for the blind has, generation after generation, been the perennial subject which thoughtful workers and educators for the blind have had to consider. It ever has and ever will, it would seem, present baffling difficulties, but the problems will never be solved by discounting or decrying an education for the blind boy unless such education will lead him into the field of useful and gainful occupation. That the educator of the blind is unable to insure the blind student against failure to obtain gainful occupation upon the completion of his high school or college course of study is not sufficient reason for questioning the educational preparation of such student: First, because there are some who, unable to secure gainful and useful occupation,

"To the disappointed earth shall give
The lives we meant to live."

Second, because it is not altogether true that education without occupation is useless. Occupations are only one of the many factors that contribute to complete living. Life is a much bigger thing than mere occupation, although it is an admitted fact that life is realized much more abundantly when useful and gainful occupation is a part of the daily round of duty.

"Business," cried the Ghost, wringing its

hands again. "Mankind was my business. The common welfare was my business; charity, mercy, forebearance, and benevolence were all my business. The dealings of my trade were but a drop of water in the comprehensive ocean of my business."

To the "comprehensive ocean" of business, the business of life, education is capable of making great contributions, even though the dealings of trade are for the most part wanting. In the great business of life, the blind needs the kind of education that will help to prepare them

"In new world weather
To still go on, and go together."

the education that will speak, as the master, saying, year by year, "Ye must be born again."

Whether we will it or not there will always remain the element of uncertainty in the results of education. No one can with certainty tell whether or not it will lead youth to a just share in the dealings of trade; so far no one has been found wise enough to look into the seeds of time and say with certainty which will grow and which will not grow. Even after a most careful testing in schools, through long years, it will be found that some seed "abideth alone," unable to die that new life may come forth. And yet the faithful farmer, year by year, goes forth to sow.

Hesiod, the Greek poet of many generations ago, has told us that "the gods have hidden the livelihood of men." With as much assurance it may be said that the gods have hidden the possibilities of youth; therefore, the educators of the blind have called to their assistance the abiding quality of faith. Though they "see through a glass darkly," yet they live and work in the hope of a better day for the blind, building upon the solid foundation of new birth—"Ye must be born again."

F. E. Palmer

The attention of readers of *The Teachers Forum* is directed to an announcement just received from the National Institute for the Blind, 224-6-8 Great Portland Street, London, concerning a Broadcast Play Competition sponsored by that institution and open to blind people throughout the world. Two prizes will be awarded—a first prize of twenty-five pounds and a second prize of fifteen pounds. Competitors may be of any age. Full information concerning this competition will appear in the October issue of the *Outlook for the Blind.*

Our Contributors

Mrs. Clara Converse Hamblin has been director of Home Economics in the Oklahoma School for the Blind for the past four years. Prior to this position she had several years' experience in church and public school teaching.

Miss Janet H. Cairns is acting as Secretary to the Department of Personnel, Perkins Institution.

Dr. B. F. Holland is an instructor in the department of educational psychology of the University of Texas. He is cooperating with the Texas School for the Blind in conducting a series of experiments dealing with the education of blind students.

Dr. Samuel P. Hayes, a regular contributor to *The Teachers Forum,* is Professor of Psychology at Mount Holyoke College, South Hadley, Massachusetts.

Dr. P. C. Potts, Superintendent of the Idaho State School for the Deaf and the Blind, was an instructor in the summer session for teachers of the blind held jointly by the Tennessee School for the Blind and the George Peabody College for Teachers.

The editorial for this issue was contributed by F. E. Palmer, Superintendent of the Iowa School for the Blind, and present president of the A. A. I. B. Mr. Palmer has been Superintendent of the Iowa School since 1918.

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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A GREEK UNIT

Helen G. Smith

On the schoolroom door hangs a sign, "A Greek House." The visitors to Perkins Institution knock. A small boy opens the door. "Won't you please come into our room?" he inquires. As they enter he courteously asks, "Would you like to have me tell you about our Greek House?"

This situation occurs several times in a week in the Fourth Grade room of the Boys' Primary, for their unit of work has been ancient Greece and their schoolroom has been changed into a Greek House.

The first days of school gave the teacher an opportunity to discover the needs of the children and to formulate an idea of the best way to present the Greek unit to them. She soon discovered that the boys did not get along well with one another, that they asked few questions about things around them and would require stimulation to rouse them to activity. She noticed that some of the boys were complacent and satisfied with inferior work; that most of the boys had considerable sight; that only one was totally blind, therefore he must be drawn into the work as completely as the others.

The daily program was flexible so if additional time were needed for some special interest or to complete a lesson it could be taken.

Each boy's parents had come from some European country, and one boy was a Greek. Therefore, the problem of arousing interest was simple.

With these facts in mind the teacher decided to begin from a geographical standpoint. The map of Europe was studied, each boy locating the country from which his parents came and a brief study was made of it. The class finally reached Greece after an imaginary journey across the ocean and made a thorough study of this country. The industries of Greece were of much interest to the class and an exhibit was made of the country's products. The class went to see a fig tree in the greenhouse. They tasted dried figs, olives, currants, and honey. They experimented with a sponge. The growing of grapes and the making of wine were important industries. Each boy made a quart of grape juice to illustrate this industry.

The American School of the Air broadcast programs dealing with European countries which were enjoyed by the class. The boys began listening for current events from the radio and from the newspapers which were read to them. These bits of information they gladly brought to school.

Near the close of this division of the Unit the teacher noticed that the class was asking more questions and that the map had particularly aroused intellectual curiosity. George, the Greek boy, brought information from his home and shared it with his classmates. They invited a Greek girl to come and tell them about her country.

One day a short story was being read to the class in which reference was made to "Athena" and the "Parthenon." Immediately one boy asked, "Who Is Athena?" This was the question which led to the next step of the project—the mythology of the Greeks. As the class was an imaginative group, a sincere appreciation of the myths was shown.

The boys wrote an original play for the morning assembly. The characters were Greek gods. After this play they continued to call one another by their character-names on the playground. The gods and what they stood for became real to them. When the boys made their puppets they transferred the names to them. These hand puppets are invaluable for classroom dramatization. They are particularly a good form of handwork for blind children as every step in the making of them can be done entirely by the children themselves. A partially seeing child can paint the faces as his share of the work. Dramatics can be used as a

means of vitalizing almost any subject. Imagination and creativeness certainly get an inning and what can be easier than to have a puppet show? Puppets not only serve for expression, but also for cooperation and coordination of muscular skills which are needed by blind children.

Among several boys a desire to improve in reading was noticed. Especially as they read from "Nature Myths," the poorer readers put forth their best efforts. Original work brought an improvement in writing.

"Why are we learning so much about their gods and goddesses?"

And with that thought the last division of the Unit—the life, customs, and history of the ancient Greeks—was entered upon.

Never was there a class so genuinely interested and enthusiastic as these boys were over *The Children's Homer.*

Among one of the things studied was a Greek House. The class decided to change their schoolroom into one. This brought into their arithmetic much measuring, a number experience which the boys needed. After a rough plan was drawn up, the Manual Training teacher was consulted. He entered into the plan and made it possible. One of his classes of older boys cut and notched the wood necessary and brought it to the Fourth Grade boys. For a few weeks there was a great deal of hammering in their activity period and at length the frames were nailed together. Then came the hardest work of all. A roll of heavy paper had to be measured, cut, fitted, and nailed to the frames. These were the walls. The frames were attached together with hinges and the rooms were in order. The boys examined the exterior of the brick school building and found how bricks were laid. Pieces of paper were cut to represent sun dried bricks and were pasted to the walls of their Greek House.

The columns presented a difficulty at first. But by taking heavy wrapping paper and plaiting it, a suitable fluting effect was gained for the shaft. Then white crepe paper was sewed together and stuffed with excelsior for the rings of the column. Cardboard boxes were used for the capitals. The column was calcimined and put in place.

For the courtyard a five foot square box was placed in the center of the floor. Turf was transplanted in it which, for a time, grew successfully. A bowl with goldfish was placed in the center of the garden. The boys made some simple crepe paper flowers and decorated the garden. In the winter months they planted the narcissus and the hyacinth. In the spring they never lacked for fresh flowers in their courtyard. Thus nature was an interesting part of the Unit.

A few Greek statues were brought into the room and a pedestal served as an altar which every Greek household had. One can see at a glance the valuable social training it gave the boys. It taught them courtesy. They actually felt themselves hosts; they really were Greeks living in a Greek House.

One afternoon while three boys were painting their shields this conversation took place:

"I wish you'd call me Hercules."

"All right. Call me Odysseus."

"I'll be Telemachus."

Quickly the self-named Odysseus turned and said, "Hello, son."

They turned and asked their teacher if she would call them by these names in school. Certainly this showed a close relationship between intellectual interests and dramatic play.

Just to wear a costume is a satisfactory way for a child to enter into the life of others. The boys enjoyed their helmets which they had constructed and their chitons which they made and dyed; it was not unusual to see them clad in these costumes at any time in school.

Swords were made, pottery was modeled and a Greek temple was built.

Each boy measured, planted and harvested his own garden of lettuce, onions, and radishes in the spring.

The conclusion of this part of the unit was an Athenian meal. Each boy wore his costume which he had made. Part of the class were slaves, the rest Athenian noblemen. The slaves served the meal, first pouring scented water over the guests' hands and feet. The guests took a reclining position on the couches, and small tables with the food were brought in. To be sure the symposium after the meal was brief but the boys felt that they had been to a Greek feast.

Museums were visited and Greek architecture was pointed out in various buildings. The class contributed regularly to the children's morning assembly program with original work. All the subjects of the curriculum were brought into the center of interest—the Greeks. The unit lasted the whole school year.

"Do the children get tired of a unit which lasts a whole school term?"

This class did not. Teacher activity should not be substituted for children's activity and time should be allowed for the children to become curious, to wonder, to think, to find out, and to do.

The Greek unit has contributed much to this class of boys. It brought them social training and social mindedness. It taught them how to get along with others smoothly, cooperatively, and to play and work with the others for the good of the group. It gave them a satisfactory body of information, rich in content. This type of project developed desirable habits and attitudes. It gave them an appreciation of people of other countries. Growth in their skills and abilities was evident. Their school days were days of happy living.

In the July-August issue of "The Harvester," a bi-monthly publication issued by the Home of Onesiphorus, appears a picture of the blind boys in the home, together with an article describing their accomplishments. The Home of Onesiphorus, located at Taianfu, China, was established for the welfare of destitute Chinese.

FOUNDATION LIBRARY

The *National Catholic Educational Association Bulletin,* November, 1934, contains the Report of the Proceedings and Addresses of the Thirty-first Annual Meeting, Chicago, Illinois, June, 1934. The Blind-Education Section met for three sessions. At the first session the paper given was "The Magic Key" by Sister M. Alma; which treated of the religious training of the blind child. Two papers were given at the second session, "Literary Likes and Dislikes Among Blind Children" by Sister M. Eymard, and "Our Work Among the Deaf Mutes and the Blind" by Sister M. Gertrude. At the third and last session, the paper "Character Formation of Blind Children" by Sister M. Gregory was read.

. . . *And There Was Light* for March, 1935 carries an article "The Sense of Obstacles" by Mattoso da Fonseca, who is Director of the Asilo-Escola Antonio Feliciano de Castilho in Lisbon, Portugal. The writer discusses his observations of the obstacle sense as found in the blind children in his school. He gives as the opinion of many that the obstacle sense can manifest itself independently of hearing, but states that very few blind persons manage to locate exactly the sensation of obstacles.

In the *Journal of Exceptional Children* for May, 1935 is found an article called "Can the Blind Person Serve Industry" by J. F. Clunk. The writer says, "In the United States, there is approximately one employable blind person in every five thousand of population, and each of these individuals could and should be normally employed and normally absorbed in ordinary industry. Before this can be done, however, several things must be accomplished. First, prejudice will have to be eliminated; second, the sighted world must modify its conception of the degree of handicap involved in physical blindness; and third, social agencies, in order to bring about the most satisfactory results, should add to their staffs blind persons trained in the business of job analysis and vocational guidance and placement."

DOCTOR ALLEN SAYS:

THE LAYOUT OF OVERBROOK EXPLAINED

In 1890 regimentation was the order of the day at the old Philadelphia Institution. Crowded conditions and an investigation-engendered morale called for its continuance, together with constant supervision. The buildings were four-story. When the gong rang for fire drill the pupils fell in line by groups, each covering with the hand a shoulder of the one ahead, and marched along the right of the hall and stairway to the rendezvous. This was excellent for an emergency but too much of a good thing between recitations; and yet, we had it then, too, for confusion reigned without it.

Marching to meals in the great basement was not necessary. But as soon as all were seated the master in charge sounded the loud electric bell for grace and again for its close —whereupon everyone fell to. Imagine the scene: the pupils at long oilcloth-covered tables on which were piles of buttered bread at intervals, the main course having been served beforehand in heavy plates or bowls, the drinking water in mugs. The master circulated about, impatient to have the business over with. Although he kept order the table manners suffered. Such table regimentation was not peculiar to our school. I have seen it often both in this country and abroad. Doubtless barrack messes are much the same.

My predecessor, who had named me to succeed him, just as I later named my successor there, was most helpful in counsel. He early said in substance, "You will find things here which you will wish to change but nothing for which there is not a reason. Ask me for this before you act." Another wise bit of advice was, "Never appoint to a position of responsibility inside the institution a pupil who has not had a year of realization outside."

My nine years at the old place piled up a list of what to avoid at the new. Overbrook was to be a real reconstruction—one primarily of the spirit; and it became so. We built unobtrusively for physical control, and relied less upon the cure of troubles than upon their prevention. The architects provided us fire-resistant, low buildings, doing away with fire drills and fear; bright, above-ground diningrooms, ample circulation and play space indoors and out. The general plan was segegrate-congregate, and it really gave us exceeding much at little cost. It did sacrifice the element of pupil contributory effort in housework and, generally, the intimate contact of family living as I knew it in my youth at boarding school and as teacher both in London and South Boston. The pupils, many adults, had not been brought up with good table manners. The teachers, accustomed to a rather luxurious table apart, would have objected to eating with them; and what I needed most and aimed to have was loyal cooperation. But the independent kindergarten cottage had, and still retains, the family plan. My successor improved dining arrangements by putting senior pupils at small tables and asking the teachers to visit them often, as I do when I go there. He has also housed a select group of young men in a separate cottage where they live together with a master and his family; and he has plans for a model cottage for selected girls where they may learn the graceful and practical art of living.

Overbrook more than met expectations. We were proud of it, and so were the Managers and so they still are, as they stated in no doubtful terms at the school's centenary.

THE ARTHUR SUNSHINE HOME AND NURSERY SCHOOL FOR THE BLIND: NURSERY SCHOOL DEPARTMENT

BARBARA MITCHELL

At the Arthur Sunshine Home and Nursery School for the Blind the nursery school teachers try to keep ever before them the objective of giving their small physically-handicapped pupils a foundation of habits and attitudes which will prepare them for taking their place on an equal footing with seeing boys and girls of their own age.

It is not our aim to have the children merely ape the seeing child for we want them to develop as *individuals* with rich potentialities of their own. We feel that this is the surest way of helping them become well-adjusted, acceptable members of society. Therefore emphasis is laid on richness and breadth of experience, and on the child's ability to interpret and make use of this experience. Since much of the blind child's knowledge must come from actual contact with things, we have found that one of the first necessities is to concentrate on the removal of those fears which inhibit the child from seeking constructive experiences. To help the children orient themselves as freely and accurately as possible they are encouraged to run up and down hills and in and out of gates and buildings entirely by themselves. They are also trained to take directions from a distance. In this way they respond surprisingly well to directions, eventually making use of the terms forward, backward, right, left, and so forth. As they lose their fears they will be found doing such things as sliding down hill alone on sleds or carts, jumping from piles of blocks higher than they are tall, pounding nails and sawing wood, and caring for their pets.

Another thing which we stress as part of their fundamental equipment for gaining experience is the good use of their hands. For this purpose they are taught to manipulate many objects and to describe what they have handled, and then to interpret it in some way, as for instance through their carpentry work or in play. In giving the children this training we find it very important to make sure that the child relates the verbal description of the thing with the actual sensory experience of it.

Other fundamental concepts which we try to establish in the minds of these children before they enter schools or classes for the blind are those of time and of number. They learn to recognize the main divisions of the day; the difference between yesterday, today and tomorrow; and they have some idea of weeks, months, and seasons. This, together with the counting of objects, the measuring of parts for their carpentry work, and some of the spontaneous games which they play, all work together to give them an appreciation of numbers which seems to be most important for the adequate adjustment of the children in the schools to which they will go.

Theoretically, the children leave the nursery and enter the nursery school when they are two or two and a half, but actually these particular babies whom we have had at the Arthur Home during the last year have been too retarded in development, although probably not in innate ability, to permit of their entrance into the nursery school as soon as this. During the next few months three or four of the children who have developed sufficiently will join the nursery school group, but probably this will not be before they have reached the age of three years.

During the past year, the lower age limit has varied from three and a half to four. Because of the fact that the institution used to take older children, we have had left over in the group this year a boy and a girl who were about nine. Now that they have left,

our group is strictly within the age limit which we have tentatively established as being the wisest, that is, under seven, During the last year the intelligence quotients of the nursery school group have ranged from 55 for the oldest child to 141 for one of the youngest. These ranges in mental and physical ages would seem to complicate our problems sufficiently. However, we have also had children coming for special training who have stayed for periods ranging from a few weeks to two or three months. Usually, however, the number of children in the nursery school group is somewhere around nine. It can easily be seen that only a very informal and flexible program could meet the needs of each of these children with their varied abilities and disabilities.

Our curriculum in the nursery school group includes morning assembly, during which the children sing the songs that they particularly like, and either tell stories or ask to have one or two read to them by the teacher. For a good many months the stories told by the children were usually about the experiences they had had the day before. This was done in order to give them a sense of past and present time, in order that they might look upon their activities as having continuity. After assembly the children go outside for the rest of the morning. They devote their outdoor time to projects, trips, games, and various seasonal activities. At the middle of the morning there is orange or other fruit juice. This period brings the group together for a brief time of quiet, and also offers an opportunity for training the children to pour and pass liquids. After dinner there is a fairly long rest period which is followed by rhythmic work and corrective exercises. The rest of the afternoon is given to free play out-of-doors.

Even more than would be done for seeing children, the activities of this group have been based upon the fundamental necessities of life such as food, clothing, shelter, transportation, and social group activities. A few words about the projects relating to food may give some idea of the type of activity we are stressing. In the spring the children planted gardens, watered them, and watched them grow. For the most part only those vegetables were planted which could be eaten raw when they were later pulled up by the children. On rainy days the group cooked various things such as eggs from a nearby farm, desserts, candy and popcorn. In warm weather they made their own sandwiches for picnics. Several times they have been downtown to purchase meat and fish which they later cooked out-of-doors or over electric plates in small frying pans. In order to relate food to the beginnings of social training, they have prepared and served such things as lemonade and cookies for parties which they have planned themselves and for which they have acted as hosts to various people of the institution whom they invited. Through these activities they have learned the names of food, their characteristics, their source, and even a little about their purpose. They have also gained some idea of the part played by different people such as the butcher and the cook in the preparation of food before it is served.

Relevant to this is their training in learning how to eat. Because of the fact that ours is a residential school it is possible for us to teach the children table manners during their regular meal times. This means that at least one of the teachers must be on duty at dinner and supper. The mechanics of eating are infinitely more difficult for a child who does not see than for one who does. However, after a few months of persistent, patient training the children are learning to eat with a fork from a flat plate, although they still need the help of a pusher. Here again we have tried to keep in mind the special needs of blind children and we have therefore not insisted upon an exact reproduction of the manners of seeing children. We have had our children use pushers to guide the food to their forks because in this way they eat much more neatly and less conspicuously.

Because of the fact that most of our children are suffering from physical or behavior problems in addition to their blindness, it has been necessary for us to lower our requirements for them during their earlier years. But it is our goal to have the blind children reach a parity with those who see by the time they are of school age. This applies to neatness and inconspicuousness in eating, skill in dressing themselves, extent of meaningful vocabulary, richness of experience, and so forth.

Since the children learn to dress themselves as soon as possible they know various ways of fastening their clothes, they know where they should be hung, and they know something about the relationship between certain types of clothing and the weather. They are taught to take care of their clothes and to put them away, in so far as this is possible for children of their age. We do not mean to expect more of them in this respect than would be demanded of seeing children of corresponding age, but because of the fact that order is of even greater importance to a blind person than to one who sees we feel it is necessary to impress order and neatness upon the children.

Through their dressing and undressing themselves, their care of their own clothing, and their washing of their dolls' clothing, they have learned something about materials and the places from which those materials come. There are times, too, when the children must scrub their own clothes as a necessary consequence of their own misdeeds.

The arrangement of rooms, the relationship of different rooms to each other, and the proportions and construction of a house are things which it is very hard to make meaningful to small blind children. A seeing child knows the arrangement of a room without even thinking about it, he knows which rooms have entrances into other rooms, and he knows that the ceiling of one room is the floor to another. The blind pre-school child must learn these things through actual contact with the objects and through a reproduction of them in play. Our older girls have the care of a rather large doll house for which they painted the furniture, with some help from the boys. They are responsible for keeping the floors and furniture clean and in order, although it must be confessed that their sense of responsibility with regard to these particular matters is still not fully developed. The furniture in the doll house is as nearly like that of a real house as possible. One corner representing the kitchen has a two-burner, unattached gas stove, nails on which to hang real pots and pans, unbreakable dishes and real knives and forks with a regular box to hold them. Our experience has taught us that most household toys are not sturdy enough to be practicable for use with such young visually-handicapped children because the toys are too likely to be pushed off from tables or to be stepped on. Also, most of them are too small for a blind child to gain a real idea of their use through actual experience. Therefore, as far as possible we have gotten large, sturdy equipment.

Next to the kitchen in this doll house is an oilcloth-covered table which the children can set when they are playing parties. In another corner is a doll's bed beside which is a dresser for the doll clothes. There are also a trunk and a small suitcase, both of which they are fond of packing and carrying around. The chairs and a cabinet are constantly being shifted from one place to another, too. Our one nine-year-old girl, who has some vision but is of border-line mentality, has been given the chief responsibility for the care of the doll house. Although the house itself is far from immaculate the experience which this child has gained has done much to develop in her at least a little sense of responsibility.

On rainy days most of the children are made to feel that they are helping to clean the nursery schoolroom by being allowed to use pails and mops and dust cloths in there. Frequently individual children are given

other small cleaning-up jobs to do which make them feel very important.

All their experience in connection with houses we try to make meaningful to them by checking their understanding of what they have been doing through the use of questions, the invention of stories, and through games at orienting themselves within any given room.

The children have been particularly interested in the construction of houses because many have been built in our immediate neighborhood during the last few months. We visited these houses many times and found them in all stages of construction, so that eventually the children could recognize such materials as wood, brick, stone, shingles, and pipes. They were especially intrigued by the cranes which were used to dig out the cellars. The children were especially fortunate in being able to look over the crane, to learn how big it was and how it worked. We had a toy crane which could be operated by having a child sit on it, and with the use of this particular toy two or three of the children dug many cellars in the sand piles. One cellar, larger than the others, was made in the ground near one of the buildings by the use of the crane and shovels. This cellar was used for a small house which they built of bricks and of cement blocks which the Home happened to have. These blocks were not only laid one upon the other as they were laid in the actual houses, but the children made their own cement and cemented the blocks together. They also made a cement floor and a small roadway.

Transportation has proven to be an unusually interesting project to these children. At times it has seemed as though the totally blind were even more interested in this particular subject than were the partially-seeing. The older members of the nursery school group have all been on trains, subways, street cars, elevated trains, buses, cars, and on various kinds of boats. They have been on row boats, ferry boats, and during a trip to New York they visited an ocean liner. On many of these means of transportation the children have had a number of rides and since each ride is taken as an opportunity for training, many of our children seem to us to be even better informed on the construction and operation of conveyances than is the average seeing child of the same age.

These trips have stimulated various play activities which have included the reproduction of methods of transportation in carpentry work and their incorporation in dramatic play. Trains, boats, and aeroplanes have been made out of clay and out of wood and blocks. Toys resembling the actual conveyances have been introduced at about the same time.

Possibly there is some doubt, psychologically speaking, of the value to be gained from the use of small objects to represent larger ones with blind children, but it seems to us that once the child has had contact with the actual objects the toys and models have been of great value.

We do not feel that we have yet solved the problem of using clay with preschool blind children as effectively as we might. Thus far it has been our experience that when the children could not make what they were trying to model out of one piece of clay they began to lose interest. It may be that they are still too young to use the supplementary aids which can be introduced with slightly older children, as for instance, the sticks which help a clay elephant's legs support the weight of his body.

With the carpentry, although the results have been crude compared with those to be obtained from seeing children, nevertheless it was at least the children's own work. All of the older ones have learned to work with this medium and can now use a regular saw, find the groove alone, put in their own nails, and hammer them straight. We have found that cobblers' hammers and large-headed nails were of considerable assistance to blind children of this age level, probably because

of the fact that these made it possible for the children's hands to be closer to the center of the operation.

Boats have been sailed in the outdoor pool during the warm weather and in the bath tubs during the winter and in bad weather. Stations, docks, and airports have been made in their carpentry work and have also been built out of small indoor blocks and the very large outdoor ones.

We have tried to give the children some feeling for community life through many trips downtown and around the neighborhood. Whenever lumber and other supplies have been bought some of the children have usually gone along to the lumber yard. They have been to banks repeatedly and occasionally are allowed to buy something they want in the stores so that they have learned where different types of things are bought and have gained some idea of the value of money.

We have been unusually fortunate in having within easy reach an old-fashioned farm the owner of which, Mrs. Mary Brant, has a special interest in handicapped children and a genuine gift for extending their education without their knowing it. At the farm these tiny blind children have learned to recognize a cow from a horse and a turkey from a guinea hen. They have learned a little of the different types of feed which must be given to the different animals. They have rolled around in the hayloft, have tried to milk the cows, and have in general acquired a great wealth of experience at the same time that they have lost their fears.

In these pages I have tried to show in what way we are endeavoring to prepare pre-school visually-handicapped children for their entrance into schools and classes for the blind and partially-seeing. As yet no mention has been made of the partially-seeing because the child with some sight needs to have almost all of the same experiences as the blind child. Nevertheless, we have had the partially-seeing children use their sight and have taught them as seeing children in so far as it has been visually safe. The children know their colors, they have been allowed to use paints, and have been encouraged to describe objects in visual terms. During this last year, however, we have had so few children in the nursery school group who could be legitimately called partially-seeing that our problem has been largely that of adapting a program for use with the totally and educationally blind child.

Speaking generally, few adjustments have had to be made but these few seemed to be vitally important. It has been necessary to create more stimulation from the environment and to bring it, sometimes over objections, to the child's attention in order to offset the tendency of many of them to "just sit." Also, it has been essential not only to *allow* the children a large measure of freedom but *actively to encourage* their making use of this freedom in order that they may develop initiative, lose their fears, and learn to live and play independently. These adjustments have meant that there must be a more constant relationship between the teacher and the child than is true or desirable in a nursery school for seeing children. As the children develop more independence, however, it is possible to give them more and more time for independent play. Like seeing children, our visually-handicapped ones have been held rigidly to standards of their own level and are not allowed to slip because of their handicap. We should not expect as much of a blind child of three who is just learning to talk as we should expect of a three-year-old seeing child, but it is our hope that by the time this same child is ready for entrance into the first grade he will be running about independently, be capable of constructive independent play, and be ready intellectually for regular first grade work. In other words, our standards must rise much more steeply from year to year for these children than is true with seeing children, if they are to be on a parity with those who have full sight by the time they enter school.

MAKING NORMAL CONTACTS AVAILABLE FOR SCHOOL CHILDREN

Katherine Clark

The children in the Cleveland Public School Classes for the Blind participate with the children of normal vision of their grade in oral recitation in arithmetic, science, geography, history, language, and club work. Their oral work is carried on in the classroom of seeing children with the teacher of the seeing in charge. For this reason it is essential that, as nearly as possible, they be given the same outside contacts, and competition be kept on an equal basis.

One of the primary purposes of this work with the seeing is to give blind children the same contacts with the seeing that they will have as adults. The public school classes for the blind, then, not only prepare the child for living by training him for it, but also allow him to live in a seeing community. It is apparent, therefore, that in order to achieve the best results and to carry on the most worthwhile contacts, a unity of purpose, mutual understanding, and a congenial working atmosphere must be kept between the teacher of the seeing and the teacher of the blind and between the seeing child and the blind child.

The teacher of the seeing class must constantly keep before her the purpose of the public school classes just as does the teacher of the class for the blind. She must keep her eyes and mind open to the benefits that the blind child is deriving from his work in the seeing class. She must not only give credit where credit is due, but it is essential that she realize and accept the mental and physical shortcomings of each blind child just as she accepts those of the seeing children in the class. If the best results are to be achieved she must treat the blind child as a part of her class with no special privileges and with no special dispensations.

Although most of the regular classroom teachers with whom the blind children come in contact at present are unusually helpful and cooperative, many teachers of seeing children still hold the view that the blind child has some wonderful or unusual power in his finger tips, or, worse still, that he is crippled or mentally deficient. Either of these attitudes is very destructive to the purposes and ideals of the public school classes. It is, of course, for the teacher of the blind, and the blind child, to change these views and bring about a more helpful attitude on the part of the teacher of the seeing.

Perhaps the best time for the beginning of an understanding of this work is during a regular grade teacher's training period. It is of course apparent that this is seldom possible, due to the great number of subjects that must be included in the curriculum.

One group of teacher-training students from the School of Education of Western Reserve University helped to make possible some work along this line. This class of about fifteen girls helped to guide the classes for the blind on an enrichment tour through the Fine Arts Garden of Wade Park in Cleveland. This was brought about through the cooperation of Dr. William Gould Vinal, Professor of Nature Study at Western Reserve University.

The girls in this class were in the fourth year of teacher training work at the School of Education. Most of them had had experience in conducting field trips, nature guiding in camps, and teaching library and school garden clubs. They were by no means untried in their field. The majority of these girls will probably be coming into the school system as regular teachers within a year or two.

Each student was assigned one or two children to show through the park. This made it possible for every child in the class to get the greatest possible benefit from the

tour, and it also enabled the girls to be with the children informally for a part of the day.

The reactions of some of the girls from the teacher training college are quite interesting. They were very surprised at the normality of the blind children. They did not expect them to be able to enjoy and appreciate so thoroughly all the things that were shown them. They discovered that blind children really enjoy most of the things that seeing children enjoy. They learned that blind children are not all especially gifted with a miraculous sense of touch. They found out that they were just children—some gifted, some dull—each with his own distinct personality traits.

It is my belief that the value of this contact to the classes for the blind cannot be over-emphasized. It is hardly possible that to these future teachers the class for the blind will ever connote a group of wonderfully brilliant or unusually gifted paragons. Neither will they expect a class of queer or mentally deficient children. It will be merely an average group of children whose shortcomings and limitations are to be accepted with those of their seeing classmates and are to be dealt with largely in the same manner.

Some of these students, of course, may never come in close contact with the public school classes for the blind. However, the morning spent informally with the children will help them in understanding blind people —adults or children—with whom they come in contact anywhere in the future.

Along with the permanent benefits which the children and teachers of the classes for the blind—and all blind people—will derive from this contact, more or less indirectly, it was an enjoyable activity for the children at the time. There is probably no work or play that is a part of school life which children enjoy more than an outing or a field trip. Especially is this true of blind children living in a metropolitan area. It provides a background of experiences which all blind children need. It has been demonstrated many times that people with normal vision often go through life with their eyes closed to many of the every day things around them. How then can we expect the blind or partially sighted child to be awake to all the wonderful things in the world without special emphasis and attention being given to them? It is, of course, up to the school to provide contacts, as frequent as possible, with the beauties of nature and to give them an understanding and appreciation of these beauties.

Many of the children were so delighted with this tour which was taken jointly with the School of Education class that they expressed a desire to visit the gardens again with their parents. It is the expectation of the teachers that many of the parents will follow up this tour with other picnics and excursions with the family group, just as they have followed up other school-conducted tours in the past. With the blind child showing the parents and other members of the family some one thing in the garden that he particularly enjoyed, or some one thing he would like to see again, the parents are enabled to cooperate more intelligently with the school in furthering all kinds of outside contacts.

Due to the small number of children to each instructor, it was possible on the tour through the gardens for each child to examine a great number of things which he would ordinarily have missed. Some of the children saw more green grass than ever before in their lives. They learned the difference between the willow tree and the beech. They fed the pigeons that clustered around them. They fed the goldfish in the lake. The swan ate from their hands. They saw large-petaled magnolia blossoms. They saw the great clusters of blossoms on the Japanese cherry tree, and they crawled on hands and knees to look at the grape hyacinths. The song sparrow, blue jay, and robin gave a special performance for their benefit.

(*Continued on Page* 40)

AM I A GOOD TEACHER?

Samuel P. Hayes, Ph.D.

In spite of the tendency of young children to put their teachers upon pinnacles of admiration and confront their parents with "what teacher says" when unguarded statements are made in the home, few conscientious teachers are entirely sure of themselves and many of them welcome frank criticism of their work. Most teachers are human enough to get a real thrill from any unsolicited praise which may filter back from those "bull sessions" in which adolescents talk far into the night upon the problems of the universe and their part in its reformation; and some college teachers occasionally offer students a chance in the final examinations to suggest improvements in the content and conduct of their courses.

Educational psychologists have for years been publishing methods for measuring teachers; providing tests and rating scales of general ability, of skill in the technique of instruction, of professional preparation and knowledge of subject content, of personal qualities, and of social attitudes. For the convenience of superintendents, a list of pertinent studies has been appended below.

This article presents a scheme by which the teachers may judge themselves concerning traits upon which students put much emphasis. Although the experiment to be described was carried out in a college for seeing students, there are few points mentioned upon which a teacher of the blind would wish to be judged adversely, even though her mannerisms may not be as conspicuous to her pupils as their blindisms are to her.

The chief justification for presenting this list of "Annoying Habits of College Professors" is the fact that many of these mannerisms are developed so gradually that a teacher remains unconscious of them, and realizes their existence only when she studies such a collection of habits, constantly repeating the question, "Do I do that?" Some years ago the writer had just such an experience with the phrase "And what not," at first used whimsically, then habitually, and finally quite unconsciously; and was saved from permanent enslavement by a kind friend who suggested counting the number of times the words occurred in an hour's lecture. Many teachers are equally unconscious of the uncouth sounds they use to fill in pauses when they might better wait for the thought to find words (even with the mouth hanging open!) than utter their meaningless and annoying "Er," "Uh," "Aow" or "Huh."

At North Carolina State College, Professor Joe E. Moore asked 123 students in elementary psychology to observe their 112 teachers for two weeks and to report upon the following list of habits. They were told not to record any habit which did not annoy them personally and to keep as objective an attitude as possible. They were assured that no student's report would reach the professors under observation. They were also told that this list was merely suggestive and that additional habits might be reported. The students reported 63 additional annoying habits!

Professor Moore's Survey

I. Procedure: Make careful observation of each one of your teachers for any *mannerisms* or habits that annoy you.

II. Suggestions for classification of data: *Mannerisms* or habits such as

A. *Facial*
   1. Cocking head
   2. Frowning
   3. Twisting mouth

B. *Language*
   1. Articulation
   2. Pauses
   3. Pet expressions
   4. Pronunciation
   5. Talking too low

C. *Posture*
   1. Carriage of body

2. Sitting slouched
3. Standing in awkward positions
4. Sticking hands in pockets

D. *Movements of Limbs*
1. Twiddling fingers
2. Pulling ears or nose
3. Scratching head
4. Tinkering with watch

E *Attention*
1. Not looking at class
2. Rambling in lectures
3. Statements not complete

F *Dress*
1. Lack of neatness
2. Odd color combinations
3. Peculiar styles in clothing

G *Personal Appearance*
1. Unshaved
2. Hair unkempt
3. Nails soiled, etc.

III. Writing up one's data:

A. List each professor by name.

B. List the course and hour of class.

C. Be critical but be fair in your reporting.

D. See that your data on each professor is complete.

The following table shows the twenty-five annoying habits most frequently mentioned and the number of times each was listed:

1.	Rambling in lectures	76
2.	Twisting mouth into odd shapes	63
3.	Frowning	55
4.	Playing or tinkering with objects	51
5.	Cocking head	50
6.	Pulling ear, nose, or lips	45
7.	Sticking hands into pockets	44
8.	Standing in an awkward position	42
9.	Pausing too long in talking	41
10.	Use of pet expressions	39
11.	Scratching head	39
12.	Not looking at class	37
13.	Lacking neatness	33
14.	Talking too low	31
15.	Using sarcasm	29
16.	Walking about too much	29
17.	"Wise-cracking"	26
18.	Talking too fast	26
19.	Faulty pronunciation	22
20.	Sitting slouched down in chair	21
21.	Hair unkempt	18
22.	Nervous movements	18
23.	Odd color combinations in clothing	17
24.	Making incomplete statements	16
25.	"Riding" students	14

It will be observed that six annoying habits in this table were added by the students: using sarcasm, walking about too much, "wise-cracking," talking too fast, nervous movements, "riding" students—all of which may be of importance as distractions, or in making students critical of their teachers and perhaps even antagonistic to them.

College professors are among the most independent and least supervised professional men, and the frequency of annoying habits found in this study indicates a lack of effective self-criticism. How do teachers in schools for the blind compare with these college professors?

The following is an annotated list of recent attempts at teacher measurement and rating:

1. H. C. Almy and H. Sorenson, *Almy-Sorenson Rating Scale for Teachers* (Bloomington, Illinois: Public School Publishing Company, 1930). A single sheet rating scale of 20 items, with directions.

2. Anonymous, "Grading the Professors," *School and Society,* XXVIII (1928), 311-14. A scathing invective against the system of evaluating a college instructor's teaching efficiency by means of student opinion.

3. C. W. Boardman, "Professional Tests As Measures of Teaching Efficiency in High School," *Teachers' College Contribution to Education No. 327,* 1928. Three tests were administered to the faculties of four geographically widely separated high schools. Appendices give the professional information test, the professional procedure test, the names of experts who assisted in validating these, and a sample data sheet for pupils' rankings.

4. A. L. Bowden, "A Measurement of the Effectiveness of College Teaching," *Journal of Educational Sociology,* IV (1930), 634-41. A set of ten questions are

answered by advanced students at the beginning of courses in anthropology and social psychology. These same questions are again answered at the end of the course and the percentage of changes made in the answers indicates the effectiveness of teachers' methods.

5. F. S. Breed, "Factors Contributing to Success in College Teaching," *Journal of Educational Research,* XVI (1927), 247-53. A questionnaire listing 34 selected instructional activities was ranked by 56 members of the faculty and 100 students at the University of Chicago. The average rankings for the two groups were very similar and indicate that the most important factors have to do with (1) knowledge and organization of subject matter, (2) skill in instruction, (3) personal qualities, (4) professional development, and (5) university co-operation.

6. R. A. Carrigan, *Carrigan Score Card for Rating Teaching and the Teacher* (Yonkers-on-Hudson: World Book Co., 1930), p. 4. The card can be used in either a large or a small school unit as a guide for teachers in improving their work. There are two parts: Part I for evaluating the classroom work of the teacher during a supervisory visit, and Part II for evaluating six personal and professional qualities.

7. N. Castleman, M. Grover, and H. Moore, "An Aptitude Test for High School Teachers," *Journal of Applied Psychology,* XV (1931), 208-13. Each of 104 teachers was scored on her choice of a solution for each of fifty problem situations. The authors concluded that a high score on the test seemed to indicate the possession of those personality traits which promise success as a teacher.

8. R. B. Cattel, "The Assessment of Teaching Ability: A Survey of Professional Opinion on the Qualities of a Good Teacher," *British Journal of Educational Psychology,* I (1931), 48-72. The qualities necessary for success in teaching, as indicated most frequently by supervisors of teachers and instructors of cadet teachers, are analyzed and reduced to a list useable for rating scale purposes. This list includes 22 non-overlapping attributes of which ten, embodying those but little susceptible to education, compose a guide for selecting prospective teacher material at early school levels. A bibliography is appended.

9. O. M. Clem, "What Do My Students Think About My Teaching?" *School and Society,* XXXI (1930), 96-100. The author presents a check list of 75 items whereby a college instructor may secure the opinion of his students on the details of his teaching procedure. By means of the list it was discovered that experienced teachers preferred less definite assignments, fewer reviews, less personal anecdote, more course content, more illustrations, more emphasis on points of view, and less traditional behavior on the part of the instructor than did less experienced or inexperienced teachers.

10. W. B. Jones and D. A. Worcester, "The Value of the Photograph in the Selection of Teachers," *Journal of Applied Psychology,* XIV (1930), 54-62. Judgments on sets of photographs of teachers by 148 persons (superintendents, secretaries of school boards and placement bureaus) show agreement when taken as a whole, but wide divergence between individual judges, which in no case provides an evaluation with any factual basis other than a general idea of the teacher's appearance.

11. Edith M. Leonard, *Rating Sheet for Predicting Teaching Success* (Boston: Houghton Mifflin Co.). Provision is made for rating 18 traits in personal and professional equipment, and the results attained in the classroom.

12. K. H. McGill, "The School-Teacher Stereotype," *Journal of Educational Sociology,* IV (1931), 642-50. In this study the class types or class pictures are called to mind by photographs. Photographs of five women (three of them school-teachers) and five men were shown to students at the University of Nebraska. The occupations

of two of the three teachers were guessed correctly with a high frequency. Brief reasons for each occupational identification were then asked for and a "stern, dignified, reserved appearance" occurred most frequently, indicating the type of the schoolteacher stereotype.

13. Joe E. Moore, "Annoying Habits of College Professors," *Journal of Abnormal Psychology,* XXX (1935), 43-6.

14. F. A. Moss, *George Washington University Teaching Aptitude Test,* Center for Psychological Service, 2026 G Street, N. W., Washington, D. C. A series of objective tests to measure judgment in teaching situations, reasoning and information on school problems, comprehension and retention of material read, observation and recall of details in a picture, and recognition of mental states from facial expressions.

15. A. Y. Reed, "Increasing Personality Assets," *Survey,* LXII (1929), 245-6. The attitudes and habits of teachers have an important influence on the personality of their pupils. Good taste, honesty in facing facts, an atmosphere inviting frankness and seriousness of purpose are among these desirable traits.

16. A. R. Root, "Student Ratings of Teachers," *Journal of Higher Education,* II (1931), 311-15. A student teacher critique questionnaire of 42 items with a high reliability is presented. Several specific cases are given to show validity and sincerity; there is a definite lack of personal antagonism. Such form should be of value to individual instructors and to administrators.

17. T. H. Schutte, *Schutte Scale for Rating Teachers* (Yonkers-on-Hudson: World Book Company). The teacher is rated in five general lines: personal and social qualities, co-operative qualities, leadership, scientific and professional attitude, and teaching ability. Teachers may with benefit rate themselves.

18. J. R. Shannon, "Personal and Social Traits Requisite for High-Grade Teaching in Secondary Schools" (Terre Haute, Indiana: State Normal Press, 1928), p. 112. A list of 73 personal and social traits selected from recommendation blanks, rating forms, and the literature of student opinion was submitted to 97 supervisors who were asked to check against the list the best and the worst high school teachers they had ever employed. Seventeen traits emerged, nearly all of which should be present in successful teachers. An annotated bibliography of 150 titles is given.

19. J. M. Stalnaker and H. H. Remmers, "Can Students Discriminate Traits Associated With Success in Teaching?" *Journal of Applied Psychology,* XII (1928), 602-10. A statistical study of the Purdue Rating Scale for Instructors indicated a high degree of discrimination and freedom from "halo effects" on the part of the students.

20. J. A. Starrak, "Student Rating of Instruction," *Journal of Higher Education,* V (1934), 88-90. Teachers in Iowa State College have gained great benefit from the use of a rating scale covering 11 essentials of teaching (preparation for class meetings, interest and enthusiasm in one's subject, ability to arouse interest in students, organization of course, scholarship, ability to express thoughts, enunciation, thinking demanded of students, assignments, leading discussion and questioning, and sense of proportion) and six personality traits (feeling between instructor and students, sense of humor, self-confidence, tolerance and liberality, personal appearance and peculiarities.

The attention of readers of *The Teachers' Forum* is called to a book recently published by the World Book Company entitled *Education of the Slow-Learning Child,* by Christine P. Ingram. The author is Supervisor in the Department of Child Study in Special Education, Rochester, New York. The introduction is by Dr. Elise H. Martens, Senior Specialist in the Education of Exceptional Children, United States Office of Education.

SOME FUNDAMENTAL CONSIDERATIONS IN THE RECONSTRUCTION OF THE EDUCATIONAL PROGRAM OF A RESIDENTIAL SCHOOL FOR THE BLIND

R. S. French, Ph.D.

Attempts, such as Spencer's, to delimit the content and processes of education in terms of fundamental needs and appetites: food, clothing, shelter, sex, social cooperation, etc., are vitiated for even practical purposes by the fallacy of assuming that human beings need education in direct ratio to the insistency of the practical demands, whereas the reverse is likely to be true. In this connection I like to think of the story of W. J. Locke about the traveling salesman whose "line" was chinaware, let us say, but who had many lines of cultural interest: one of his largest sales came because he did not talk shop. Man as man *never* lives by bread alone. We are educated not to grow wheat or to make bread but to be human and to become continuously more human. The pragmatist, the utilitarian, the positivist confuse education with the process of making a living, whereas education means rather living itself and living to the utmost fulness of one's powers and developing those powers, including the aesthetic, to a point of largeness with precision, where life itself opens into new vistas of wonder and of power. The trouble with Dewey and all technocrats, and with all Utopians, is that they envision human life, and hence education, chiefly in terms of a narrow economics. Even the substitution of humanity for wealth leaves one suspicious that happiness and progressive adjustment are still thought of largely in terms of material satisfactions. This tends to reduce education to training for efficiency, a narrow, machine-age efficiency; even "education for the effective use of leisure time" smacks of machine precision, of passivity of pleasures, of big-business baseball, radio, cinema, and commercial racing.

More specifically in application to the blind or partially blind, education must include not only fulness of living but such constructive and reconstructive efforts as will make up for the narrowing of external range involved in lack or impairment of sight. If, as the newer biological psychology teaches, the person as a conscious being involves not only self but the sum total of environment and not only present time and space relationships but the sum total of the past and the potentialities of the future, integrated personaliy can be attained in the blind person only by an almost superhuman effort to make up for the deficiency in impressions. This effort means not simply an extension of the time spent in learning nor yet a mere intensification of attention or concentration; it means rather a cultivation and extension of range in the neglected senses and a more intelligent integration of the materials offered by perception. Helen Keller has pointed out this fundamental truth in poetic prose in *The World I Live In.*

The Greeks were the first to state education in human terms. The general pattern of their education as developed by 400 B. C. can scarcely be improved upon. In fact the development of education through subsequent ages has meant largely the filling out and supplementing of that pattern, not its discard or replacement. Only communism has offered a fundamentally new pattern. Christianity, radical as it was in its spiritual reform, built upon the past in its work in education and wisely accepted the general human concepts worked out by the Greeks and Romans. Supplementing the Graeco-Roman with the enlarged spiritual outlook of Christian thinking and the extensions and changes of method wrought by modern science, I submit the following as the ideal re-

quirements for the *educated man,* whether blind or seeing:

Major 1. The mastery of language, spoken and written,
   a. the vernacular, by all means, and
   b. a foreign language or languages, if needed.
2. An effective introduction to quantitive thinking, both in
   a. number and measurement, and
   b. form and motion, and also in
   c. logical relationships.
3. A sympathetic understanding of one's physical environment through a study of
   a. geography as orientation; an appreciative and reasonably broad view of
   b. the non-living objective world of physics, chemistry and astronomy; a more sympathetic view of
   c. the living objective world of plants and animals, including
   d. the human mechanism objectively considered.
4 An understanding of the socio-economic environment leading to intelligent participation. This would involve a study of
   a. the self as social being,
   b. the family as the smallest organized unit,
   c. local government and local social and economic relationships,
   d. the larger units of governmental, social and economic organization,
   e. universal relations, including world religions as organic bodies and proposed frameworks of international social and economic cooperation.
5. An appreciative and participative knowledge of the subjective and idealized world or the world of creative intelligence through
   a. self-culture as a fine art,
   b. the language arts from the points of view of both appreciation and production,
   c. music, chiefly appreciative,
   d. the plastic arts and crafts,
   e. the larger creative units of architecture, landscaping, city planning, regional development,
   f. The world of moral values and of higher personal relationship revealed in religion and critically studied in philosophy.
6. An understanding of how it all came about or history in its broadest aspects, more particularly
   a. cosmic and organic evolution,
   b. archaeology and pre-history,
   c. world history,
   d. national history,
   e. special histories, local history, history of art, history of medicine, etc.

Major Keeping reasonably intelligent and up-to-date throughout life on the fundamentals outlined above.

Minor Specialization in the study of any of the above or of any of their subdivisions or any combination of them or their subdivisions.

Major A life work or occupation involving the technical application or effective side of 1 to 6, such vocation to be chosen on the basis of
   a. personal preference,
   b. measured abilities,
   c. probable outlook and
   d. the economic and social worth of the occupation chosen.

Minor Avocations, demanding time and serious effort but offering a maximum of personal satisfaction and definite relief from vocational cares.

Major Health, bodily and mental, with a study of the means of maintaining health and the use especially of recreation in almost the literal sense, Health means essentially a balance of functions and involves emotional stability.

Education in the Greek sense follows the golden mean—everything according to measure and nothing in excess. It sees things clearly and sees them whole. It has little place for moonshine or sentimentality, little

place for ecstacy or exaltation; but does not preclude supreme moments of insight, both mental and spiritual.

Ancient civilization failed and its education became ineffective and inane because of the premature arrest of science and the growth of superstition, because of governmental instability and the replacement of free institutions by autocracies, because of the lack of a universal philosophy-religion despite lip-service to humanity, and last because of the lack of an effective pragmatism or better because of failure to put science to work. Cruel slavery, moral degeneration and the other blots on ancient civilization are symptomatic of the failure of the inner vision rather than causes of decline. Mediaevalism passed into modernity largely through a pagan revival. Modernism therefore lacks very much what the ancient world lacked. Our own decline as a nation and as a civilization, if it should come, will be due chiefly to four factors: first, the displacement of humanity by mechanical efficiency and the making of men into robots; second, the failure of Christianity (so far) to assimilate the body of modern scientific findings and hence to rise to new universals; third, the substitution of false gods, for example, the *Proletariat,* for the true universal human worths and for the true and only God; and last, desertion of the principle of democracy, that is, of essential human equality, or the false application of the same principle of democracy as implying a leveling in all things and a forgetting of the fact that men are for the most part unequal.

It is easy to object that the above principles are too broad and that what we need is specific curriculum and specific method. But specific curriculum and specific method are just what we are suffering from educationally. One needs to have lived through only a quarter of a century of educational change to have noted the rise and passing of one fad after another, one *plan* after another, *integration* followed by disintegration, *fusion* followed by confusion. It is a sad story. Fortunately the education of the blind has suffered less than general education, largely because of fixity of systems and materials.

The time has come for a profound and critical examination of our aims and purposes and equally of what materials can be used. I take it that there is no quarrel with the newer concepts of education through activity, if it is granted that Séguin and the mystics are right in the contention that purposeful quietude may be classed with activity. I take it also that we shall try in the future to picture the child in the large and not in terms of I. Q.'s and other limiting concepts. At best we can but picture a part of what is so rich and so far-reaching as human nature, but even in our partial view we can have in mind "the life abundant." If we can only accept the words of the great Master as guiding principles and really believe them the life of present day teachers will take on a richness and fulness of inspiration and of meaning that will make them guides and companions as they lead childhood and youth into a new Promised Land.

To be specific, it is the hope of the Principal and governing body of the California School for the Blind to be able to report from time to time such work of reconstruction as may be helpful to all similar schools and classes, and perhaps to other schools as well. We start with this examination of fundamentals and what is in a sense a "profession of faith" but are confident that concrete results will follow and that these results can be rendered into words and tabular form so that all interested may read about them and know what is being accomplished.

R. S. French
California School for the Blind.

The Editor recently received a mimeographed copy of the thesis" Vocational Training in Residential Schools for the Blind," presented for the degree of Master of Arts at Ohio State University by W. G. Scar-

THE TEACHERS FORUM
for
Instructors of Blind Children

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berry, Superintendent of the Ohio State School for the Blind. This study "deals specifically with that training (of the blind child) which is called vocational or pre-vocational, and refers to all courses in schools for the blind other than literary or music."

It takes up in considerable detail vocational courses offered in schools for the blind, the definition of such courses and the extent to which each vocation is taught in the schools throughout the country. A digest of this study will appear in a future issue of the *Forum.*

The office of Education, under the United States Department of the Interior, is desirous of receiving copies of yearbooks, annual reports, and special publications issued by organizations for the blind and dealing with educational problems of children and adults. Such reports should be sent to Dr. Elise H. Martens, Senior Specialist in the Education of Exceptional Children, Office of Education, U. S. Department of the Interior, Washington, D. C.

The Department of Education of the American Museum of Natural History of New York City has inaugurated its annual educational program designed to reach one million school children of the city. The aim of the museum is to teach children "the story of life." Of special interest to readers of *The Teachers Forum* is the fact that special provision has been made for children who are blind. Arrangements will be made with each teacher of blind children whereby they will be given an opportunity in the museum classrooms to handle and "to see" museum objects with their fingers.

(*Continued from Page* 32)

Undoubtedly, all the enjoyment and educational benefit which the children derived from the day's activities were as nothing compared to the understanding of the blind, the realization of the normality of the blind child, and the understanding of the purposes of public school work for the blind received by these future teachers. This was accomplished through their informal contact with the children and through a very brief discussion afterward with the teachers of the classes.

Our Contributors

Miss Helen G. Smith is a teacher in the Perkins Institution and Massachusetts School for the Blind.

Miss Barbara Mitchell is in charge of the kindergarten of the Arthur Sunshine Home and Nursery School for the Blind.

Miss Katherine Clark is a teacher in one of the braille classes conducted by the Board of Education of Cleveland, Ohio.

Dr. Samuel P. Hayes, a regular contributor to *The Teachers Forum,* is Professor of Psychology at Mount Holyoke College, South Hadley, Massachusetts.

The editorial for this issue was contributed by Dr. R. S. French, Principal of the California School for the Blind. Dr. French is well known among educators of the blind, particularly for his writings, which include the book, *From Homer to Helen Keller.*

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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15 West 16th Street
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OUTLINE OF CURRICULUM FOR KIINDERGARTEN AND GRADES I AND II

Miss Margaret A. Philips and Mrs. Pauline Boeshore Zimmerman

Editor's Note: The following curriculum for kindergarten and grades one and two, compiled by Miss Margaret A. Philips and Mrs. Pauline Boeshore Zimmerman of the Pennsylvania Institution for the Instruction of the Blind is presented to the readers of The Teachers Forum in the hope that many valuable suggestions may be obtained therefrom for the use of administrators and teachers of these three grades. The Editor will welcome any criticisms and suggestions.

For a long time the teachers of primary and kindergarten education at Overbrook felt the need of a course of study for their grades. Accordingly in the spring of 1931, Miss Betty Roberts, Miss Margaret Philips, and Miss Anna Hartman, teachers of the kindergarten group and grades I and II, planned the preparation of such a course. The mechanical work of the course occupied about one year and it embodies the experience of several teachers.

With increased responsibilities because of changing social conditions, we must be better prepared to begin work with our youngest pupils and keep growing professionally. This course is so planned that new material may be added and old omitted as experience indicates. This particular course seems practical for our school.

I. GENERAL OBJECTIVES:

A. Teaching of proper health habits
B. Socialization of group and of individuals
C. Teaching definite skills in motor control and use of hands
D. Teaching knowledge of everyday objects and of specific materials
E. Setting up proper attitudes toward learning in general and for these children in particular
F. Establishment of proper working habits
G. Development of creative instinct.

II. SPECIFIC OBJECTIVES:

A. Teaching of proper health habits
  1. Methods:
    a. Stories
    b. Games
    c. Conversation
    d. Activities—weighing, etc.
  2. Knowledge to be gained:
    a. Of body
      (1) Importance of care
      (2) Respecting others—"do not share handkerchiefs, toys, etc.
      (3) When to eat, sleep, exercise how much
  3. Habits to be learned:
    a. Good sleeping habits
    b. Good eating habits
    c. Good exercising habits

B. Socialization of Group and of Individuals
  1. Group:
    a. Group is a part of school
      (1) Certain rules to be observed
      (2) Class has certain place in school
      (3) Attitudes toward older classes and teacher
  2. Individuals:
    a. Each child works for good of class
    b. Each child is thoughtful of others
    c. Cooperation in work
    d. Helpfulness toward children and teacher—good sportsmanship
    e. Proper attitudes toward others' work — helpful criticism
    f. Desire for stimulating activity
    g. Ability to converse with classmates and adults

C. Teaching of definite skills in motor control and use of hands
  1. Skills in motor control:
    a. Walking naturally as possible
    b. Running, skipping, more complex activities

c. Hand held naturally rather than groping in front of body
d. Keeping hands away from face, parts of body or from fluttering

2. Methods for above:
a. Games and rhythms
b. Keeping hands occupied
c. Teacher repeatedly placing hands in proper positions

3. Development of skill in use of hands:
a. Teach names of fingers—
(1) Thumb
(2) Pointer finger
(These two on each hand most important; with these most work is done.)
(3) Tall finger
(4) Ring finger
(5) Baby finger

4. Learning
a. Bead stringing — bead is held between left thumb and pointer finger; needle held in right
b. Pegs and tiles—pointer finger on left hand finds hole and keeps line; right thumb and pointer finger holds peg and puts it in
c. Outlining patterns and drawing on cushions — right thumb, pointer and tall fingers hold tack; left pointer directs placement
d. Paper cutting—right thumb and tall finger holds scissors; left thumb directs scissors on dotted line.
e. Weaving — strips held in right hand; left thumb and pointer finger do weaving
f. Clay modelling
g. Block building
h. Paper folding
i. Sewing, buttoning, lacing
j. Hammering

D. Teaching of specific knowledge
1. Familiarity with buildings, grounds
2. Familiarity with furnishings and materials used—eating utensils, bathroom fixtures, bedroom furniture, etc.
3. Learning about foods, nature, clothing, toys, other people, etc.
4. Learning about materials, clay, wool, etc. — distinguishing between kinds
5. Learning poems, stories, songs
a. Methods:
(1) Telling children
(2) Most successful—permitting children to handle everything possible
(3) Through stories
(4) Through conversation — pupil stimulated whenever possible
(5) Through project work
(6) Through dramatization

E. Establishing proper attitudes toward learning:
1. Make children want to learn
2. Make children better their own records rather than compete with other children; it is more encouraging
3. Make children realize their hands are their best helpers
a. Methods:
(1) Stimulation of desire for activity in children
(2) Make each bit of work interesting. It must mean something, not be merely an object for the waste-basket
(3) Give much encouragement; praise each effort, stimulating desire to do better

F. Establishing proper working habits:
1. Pupils keep work neat, keep room neat, keep themselves neat
2. Careful and thoughtful work
3. Pupils must share materials
4. Pupils must learn to prepare for work and straighten up room afterward—giving out materials and collecting them
5. They must learn to give constructive criticism on their own and others' work

G. Development of creative instinct:
1. Through pupil-stimulated activities
2. Through dramatization; first teacher-directed, then pupil
3. Through clay work
4. Through individual writing of music, stories and songs
5. Through project work of all kinds

III. READING: Grades I and II

A. Objectives for instruction in reading
1. To stimulate keen interest in reading and a desire to read independently
2. To introduce pupils to the thought-getting process and to develop the ability to read independently and intelligently simple passages such as are found in first-grade readers
3. To develop reasonable speed in reading
4. To gain accuracy as well as speed
5. To gain independence in word-recognition
6. To enlarge reading vocabulary
7. To emphasize correct pronunciation and enunciation
8. To correct speech defects
9. To be sure the child knows meaning and use of words

B. Method:
1. When teaching reading, the child is taught to use both hands from the first, but is allowed to change to one hand if he wishes, and the change seems justified by his achievement in reading. See *The Blind Child and His Reading,* by Kathryn E. Maxfield, p. 56. Also *Correct Posture,* pp. 43 and 54
2. Use familiar words of interest in Newark Phonic Drills
3. Write strips of braille words and sentences to be placed on Boston drill boards or pinned on cushions
4. Introduce words to be used in Monroe's *New Primer*

C. Time: 15-20 minute periods—300 minutes per week

IV. WRITING: Grades I and II

A. First steps in writing. Use braille peg board. Use simple words that have most emotional appeal for children

B. Write letters, words, sentences, using at first three-letter words found in Monroe's *New Primer.* (We use this primer because three letter words are easier for little children to write sooner.)

C. Write correctly all letters of the alphabet; simple words and sentences; use of capitals in writing word at the beginning of a sentence, and *I* as a pronoun; the period after a declarative sentence

D. Compose short stories

E. Method
1. In writing use pointer finger of the left hand to guide the stylus. The stylus is held upright under first finger between hand and finger knuckles; thumb around stylus meeting first finger

E. Time: 8-20 minute periods—160 minutes per week

V. SPELLING:

A. Grade I
1. Spell one hundred fifty words
2. Words from primers — oral and written

B. Grade II
1. Spell two hundred words (See books listed)

C. Time: 5-10 minute periods—50 minutes

VI. LANGUAGE: Grades I and II

A. In the lower grades the work in language seeks for accuracy and logical arrangement; the correction of grammatical errors, and the promotion of ease of expression in both oral and written composition

B. Memory work, story telling, dramatization and discussion

C. Time: 5-20 minute periods—100 minutes

VII. ARITHMETIC:

A. Grade I
1. No formal arithmetic is taught this grade. It should be

taught in connection with objects
2. Numbers to 100 are read from papers
3. Count to 100
4. Count by tens and fives from 10 to 100 and 5 to 100 respectively
5. Units of measure: pints, quarts, inches, feet, yards, pounds and coins

B. Grade II
1. Read and write numbers to 100
2. Addition combinations whose sum is less than 16
3. Subtraction combinations whose minuends are less than 16
4. Multiplication combinations whose products are less than 26
5. Division combinations whose dividends are less than 26
6. Pint and quart applied in practice on number 2
7. Practice in one-step reasoning problems

C. Time: 5-20 minute periods—100 minutes per week

VIII. SCIENCE:

A. Nature Study and Hygiene
1. (See books listed)
2. Time: 5-15 minute periods—75 minutes per week

IX. PHYSICAL EDUCATION: Kindergarten to Grade II inclusive

Compiled by:
Miss M. A. Philips,
Miss P. E. Boeshore and
Miss H. Andrews

A. Objectives:
1. To develop physical strength, bodily control and ease of movement; to train for social cooperation; to help encourage by experience

B. The Course:
1. The course offers an opportunity for free motor development to every child in the department. To carry out the three-fold aim, games of various types must be used: — directive games, sense games (taste, smell, etc.) bell games—skill and competition, activity plays on games; coordination and interpretation, dramatization, rhythms; muscular coordination
2. The school playground is equipped with jungle gym, kiddie - go - round, slides, swings, trolley, rocking-boat, merry-go-round, and lawn swings
3. Each child participates in all games and activities unless physically unable to do so

C. Physical Exercises and Games: (Directed outdoor play, five hours a week)
1. September:
a. The Little Mice are Creeping—Jenks, p. 95
b. Will You Dance With Me —Games & Dances, p. 44
c. Did You Ever See a Lassie —Games & Dances, p. 4
d. Goosey Goosey Gander— —Rhythmic Action Plays & Dances, p. 54
e. Mum Party—(Quiet ball game, no words spoken)
f. Looby Loo — Children's Singing Games—Old and New, p. 32
g. Who's That Knocking at My Door (Quiet game, no motion)
h. Rhythms—Marching, running, skipping, galloping, flying, birds, tiptoe, elephants
2. October:
a. The Market Man Has Come to Town—Timely Games & Songs, p. 14
b. Game for the Senses—Song Echoes from Childhood, p. 126
c. The Little Pony — Song Echoes from Childhood, p. 120
d. Ten Little Indians—Children's Singing Games, Old & New, p. 24
e. Ten Pins—(Original counting games)
f. Turn the Big Wheel—Lilts & Lyrics, p. 42
g. Rhythms — The Brownies, Giants and Elves, Autumn Leaves, Fairy Footsteps

3. November:
   a. The Bell Ringer—Timely Games & Songs for Kg., p. 9
   b. Over the River and Through the Wood — Dann II, p. 14
   c. Let Us Chase the Squirrel —Games & Dances, p. 3
   d. The Muffin Man — Children's Singing Games, p. 19
   e. The Pigeon House—Jenks, p. 94
   f. The Travelers — Holiday Book, p. 108
   g. Rhythms — Reference — Rhythms for Children Nos. 1 and 2, by Mary S. Shafer; Music by Mary Morgan Mosher
   h. High stepping, trotting and galloping horses, skating, imitating animals
4. December:
   a. Little Miss Muffet—Rhythmic Action Plays, p. 26
   b. The Sandman — Holiday Book, p. 120
   c. The Toy Man — Holiday Book, p. 84
   d. The Candy Game—(Musical game, name candy, skip around 6 chairs)
   e. The Snow Man—Small Songs for Small Singers, p. 52
   f. Here We Go Round the Christmas Tree — (Imitate walking dolls, train, drum, trumpet, top, etc.) Rhythmic Action Plays and Dances, p. 38
   g. Santa Claus Game
   h. Guessing Game—(Description of Toys)
   i. Rhythms—Jack in the Box, Walking Dolls, Snow Ball, Camels
5. January:
   a. The Snow Man — Small Songs for Small Singers
   b. I'm the Little New Year—Jenks, p. 57
   c. Hickory Dickory Dock — Crowninshield, p. 12
   d. Five Little Chickadees — Jenks, p. 93
   e. Little Ball Pass Along — Jenks, p. 105
   f. Rhythms — Imitate Christmas Toys, Snowflakes
6. February:
   a. Soldier Boys (Forward March Boys) Song Series, Bentley, p. 25
   b. Soldier Boys—Dann I, p. 92
   c. Sailor Boys—Songs of the Child World, p. 50
   d. The Postman — Holiday Songs, p. 4
   e. When You Send a Valentine—Holiday Songs, p. 5
   f. Rhythms — Marches, Soldiers, Horses, Policemen
7. March:
   a. There was a Crooked Man —Rhythmic Action Plays & Dances, p. 24
   b. To Market to Market to Buy a Fat Pig—Rhythmic Action Plays & Dances, p. 43
   c. Carrousel — Games & Dances, p. 14
   d. Clap, Clap Partner—Games & Dances, p. 16
   e. Jump, Jim Crow—Twice 55 Games, p. 31
   f. T'was This Way and That Way—Twice 55 Games, p. 53
   g. Button, Button, Who's Got the Button — Every Child's Folk Songs and Games, p. 89
   h. The Marionette — Every Child's Folk Songs and Games, p. 81
   i. Spring Dance — Every Child's Folk Songs and Games, p. 77
   j. Bean Porridge Hot
   k. Rhythms—Skipping, tiptoe, flying birds, bears, lions, *Natural Dancing,* by Helen Smith
8. April:
   a. Oats, Peas, Beans & Barley Grow — Twice 55 Games, p. 52
   b. Oh Where, Oh Where, Has My Little Dog Gone—Jenks

c. The Snail—Jenks, p. 119
d. The Farmer—Jenks, p. 121
e. I Saw a-Sailing a Ship Upon the Sea—Based on song "Sailing"
f. Rhythms—Marching, trotting, galloping, flying birds, elephants, Big Circle—(Left hands out forward—leader skip around, take a child's hand, last child grasp another hand; so on until they have a large circle)

9. May:
a. See Saw—Twice 55 Games, p. 26
b. In the Spring — Every Child's Folk Songs & Games, p. 73
c. Charley Over the Water—Rhythms for Children No. 2, by Mary S. Shafer, p. 15
d. Guessing Games — (Original)
e. Sense Games—Song Echoes from Child Land, p. 126
f. The Stream
g. The Brook

10. June:
a. Review

D. Time: 5-30 minute periods—150 minutes per week

X. HANDWORK:

A. Kindergarten
1. Bead Stringing
2. Pegs and Peg Boards
3. Blocks and Toys
4. Buttoning and Lacing
5. Weaving on Frames
6. Paper folding, cutting and pasting
7. Drawing and Modeling

B. Grades I and II
1. Raffia
2. Reed
3. Sewing
4. Finger Crochet
5. Paper Folding, cutting and pasting
6. Tying
7. Drawing and Modeling
8. Weaving

C. Time: 5-40 minute periods—200 minutes per week

XI. *TEXTS:*

A. Reading:
1. Grade I
a. Newark Phonic Drills—Paterson & Conrad
b. Monroe's *New Primer*—American Book Co. — Embossed by Howe Memorial Press, Boston
c. *Beginners' Primer,* Parts I & II—Houghton Mifflin Co.—Embossed by Howe Memorial Press
d. Winston Primer — John C. Winston Co.
e. *Elson Primer*—Elson, Runkel & Gray

2. Grade II
a. *Wag and Puff*—Marjorie Hardy
b. *Elson First Reader,* Parts I and II—Elson & Gray
c. *Winston First Reader* — John C. Winston Co.
d. *Pathway to Reading Series* —First Reader
e. *Pathway to Reading*—Parts I & II
f. *Beacon Second Reader* — Part I

B. Spelling
1. Grade II — *Graded School Speller,* Part I—Spaulding & Miller

C. Arithmetic:
1. Grade I
a. *Walks and Talks in Numberland*—Smith, Luse & Morse
b. *Work and Play with Numbers*—Wentworth & Smith

2. Grade II
a. *A Child's Book of Numbers*—John C. Stone
b. *Essentials of Arithmetic* —Wentworth & Smith

D. Science:
1. Grade I
a. *Bolenius First Grade Manual*—Bolenius
b. *Child's World* — Emilie Poulsson
c. Plan Book (Monthly) — Marion M. George
d. *For the Children's Hour*—

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FOOTBALL AS PLAYED AT THE MICHIGAN SCHOOL FOR THE BLIND

C. W. Dawson

The Michigan School for the Blind boasts of having the only blind football team in the country (to the best of its knowledge). Members at the 1934 convention of the A. A. I. B. in Missouri were amazed at the information given them by Mr. Norman Tellar, principal and coach at the Michigan School for the Blind. Not satisfied with just hearing the radio broadcasts of the game, the school decided that it would actually participate. At first the idea was frowned upon as being improbable, but worth the attempt. Their success indicates what the blind are able to do if they have the will.

The last two seasons' records indicate how successfully this activity can be carried on when the number of games won is considered, the pleasure of playing, the many outside contacts, and the few injuries suffered. The Michigan School for the Blind is classed as a Class "D" school in athletic circles. The games have been played with the reserve teams of the Class A schools in Lansing and the D schools within a thirty-five mile radius. The 1934 schedule included Ionia seconds, Morrice, Eaton Rapids, Lansing Eastern seconds, Okemos, Portland and Williamston. The Michigan School for the Blind lost two games, won four, and tied one. The team averages one hundred and forty-five pounds.

The 1935 season was almost as successful with the following record:

Michigan	Sch.	Blind	7	Morrice 19
"	"	"	7	Williamston 7
"	"	"	33	Everett 14
"	"	"	14	Vernon 28
"	"	"	14	Morrice 7
"	"	"	20	Everett 20

This record shows two games won, two lost and two tied.

In the games played there were always at least three totally blind players and often as many as five. If the Michigan school team chose to receive the kick-off, they started with five totally blind players on the line. The backfield players on receiving the kick-off, as a rule, depended on a few of the partially seeing to run interference, and, if the location of the ball was not immediately determined, the receiver had to rely on his own speed and agility for making the touchdown. Upon being tackled a player stands near the ball and calls, "LINE." The totally blind players hurry toward the call and line up in their positions. Sometimes they are aided by partially sighted members and often by understanding officials.

The style of play used during offense is the Notre Dame shift with the up man directly under the snapper-back. Occasionally a play calls for a direct pass from center to the backfield. This is risky and seldom attempted. The School for the Blind resorts to off-tackle plays, one powerful end run, and one play known to them as the submarine play in which the blind center and guards charge low, and madly ahead, forcing a hole for the necessary yardage. Occassionally a pass is attempted much to the surprise of the opponents who take for granted that such a play would not be risked. Punting is seldom used because the blind players prefer to keep the ball at close range. Only when they have their backs to the wall do they punt the ball out of danger. Where a sighted team would necessarily punt, the blind team opens up its bag of tricks and attempts a surprise play.

On defense the School for the Blind team has signals by means of which they guide the blind players. Some partially seeing player in the backfield calls the signal as soon as he diagnoses the play. At this warning the blind linesmen converge to the left, to the right, or to the center to get into the way of the ball carrier. Occasionally some

very spectacular tackles are made by totally blind players. A smashing tackle play and end play are used to break up all interference on the other side of the line. This bit of unorthodox play is generally very successful because the opponents do not expect it.

Many are under the impression that allowances are made in the football rules for the benefit of blind players. The blind players ask no quarter except that, through courtesy, the opponents are asked not to pass unless necessity requires it. The game consists mainly of straight football.

Why should football be played at the School for the Blind? Here is the answer. Because they like it. They enjoy the rough, physical contact with opponents. They show their love for the game by never missing a practice. They also enjoy it because of the friends they meet outside of school. In other affairs they are constantly being greeted by those who have played against them and have won their respect. Each week during football season the team has a game either at home or a short distance away. All games with the blind boys are good drawing cards and money-makers for the opponents. Large crowds can be expected to attend these games and a better understanding is gained of what is being done for the boys and what they can do in spite of their handicap. The boys who are out for football are the ones who are the builders of the school. They are the builders of good conduct and seldom if ever are they called to task for any disciplinary reason. Sixty per cent of the total enrollment of boys is out for football each fall. The school has a squad of twenty-three boys and twelve of these are totally blind. These blind boys have a far better physical posture and better walking habits in comparison with the other blind boys.

During the last five years of football Mr. Tellar claims that not one blind boy was injured other than minor bruises. There were only two injuries to the partially seeing boys and one of these suffered a cracked ankle bone and the other a broken shoulder. Let any coach compare his five year record with this.

The outstanding reason for the few injuries must be admitted. Most of the boys are a few years older than those found in a sighted school and therefore more developed and able to stand the hard knocks without serious injury. When these blind boys are first introduced to the game of football injuries are expected and feared. It is not an easy task for a coach to get a blind player to charge ahead into an opposing line. They must be taught and after they once learn the lesson to hit hard they are practically fearless in spite of the fact that they cannot see what is ahead of them.

The main arguments why a school for the blind should play football are the benefits derived from competition, rough physical contact, social contacts with boys from sighted schools, development of the body, development of good discipline, the satisfaction in proving that there is one more thing that the blind can do in spite of their handicap.

Two outstanding workers for the blind have passed on since the last issue of *The Teachers Forum*—Miss Helen J. Coffin, Supervisor of Braille and Sight-Saving Classes in the Cleveland Public Schools, and Charles F. F. Campbell, head of the speakers' bureau of the Community Fund, Detroit, Michigan.

Miss Coffin had been associated with the Cleveland schools since 1918. Mr. Campbell held positions of importance in work for the blind in this country in Massachusetts, Pennsylvania, District of Columbia, Ohio and Michigan. Mr. Campbell was also founder and editor of the *Outlook for the Blind* until it was taken over by the Foundation in 1924. Through the death of these two persons, work for the blind in this country has suffered a distinct loss.

DOCTOR ALLEN SAYS:

FROM AN UNDELIVERED SPEECH TO THE OLD PUPILS AT UPPER NORWOOD, AUGUST 2, 1934.

"——My after-chapel talk to the Perkins Institution pupils at the close of their school year in June last was rather personal. I told them how vigorous and well I felt and told them why, something as follows: "Fifty years ago next September I went overseas, as a young man, to teach at the Royal Normal College for the Blind. This adventure—for it was just that—quickly fascinated me, gripped my imagination, and determined my life work. My boys and girls were bright and happy—ideal pupils in an ideal setting of grounds, music and leadership. There even the routine instruction, whether intellectual or physical, could be natural and eager, and was so. My own part in our frequent demonstrations exemplifies the variety of things we American teachers did. This was conducting a physiology, physics, or literature class on the green; showing roller skating by boys on their outdoor rink, and by girls in their gymnasium; supervising boys in the swimming pools; and tandem-tricycling about the grounds with a girl pupil sitting in front.

" 'Expecting to teach abroad only one year, I remained three. Then, having returned home I was boys' principal teacher at Perkins in South Boston two years; and the next 17 directed the Philadelphia school, then again in Boston and Watertown, Perkins Institution an additional 24. Altogether this was almost a half century in close association with young people most of whom were so brave, so responsive, so full of cheer and achievement that I could say of them with Spurgeon: *The Lord gets his best soldiers out of the highlands of affliction;* and say of myself with Shakespeare: *To business that we love we rise betime, And go to't with delight.*

" 'So, having lived these many years under such inspirational influences, I have now passed the allotted age of three score years and ten, still fit in body and mind. Indeed, mine has been a career of many satisfactions, for which you and hundreds like you are largely responsible. Since my retirement from active service this fact has become ever clearer to me. I am telling it now as a compliment, a tribute which I wish to pay you and which is your due. May you severally always continue to fortify others by your example; for, as you know, everyone has some mission to perform. God be with you.'

"Yes, I could say the above in very truth. But let me tell you—especially those of you present today who were once my pupils here at Norwood, that you and your schoolmates are they who by character and daily achievement first captured my fancy and held it fast. Whatever of practical idealism I have had is owing primarily to you and to them and to the quickening atmosphere of the college. What good times we used to have together!"

Now, to you readers of *The Teachers Forum,* I will add this: Insomuch as doing what one wants most to do is play my life work has been play, not a common enough experience among teachers. Why, even since my retirement I have found pleasurable resource in writing such vignettes of personal history among blind people as are these *Dr. Allen Says;* in continuing to conduct my Harvard course on our subject; in delivering occasional papers on it and especially in keeping in touch with hosts of former pupils and other finger-reading friends through travelog letters from abroad, which appear from time to time embossed in *The Weekly News.* Truly, were it given me to choose a career afresh, under the old conditions, I should not wish for any other.

FEDERAL FUNDS USED IN RESIDENTIAL SCHOOLS FOR THE BLIND

Eber L. Palmer

More than three-quarters of a million dollars of Federal money has been made available to state schools for the bind during the past three years for the improvement of their plants. This large sum has been distributed through the various organizations set up by the Federal Government, such as the CWA, SERA, FERA, PWA, and WPA. Because of these funds, obtained through the cooperation of the state governments, and because of the efficient supervision of the administrators of the schools, thousands of blind boys and girls will find the course of their educational progress made easier through better dormitories, better school buildings, more efficient school equipment, increased teaching service, finer recreational facilities, and better surroundings, as well as other minor improvements which add to the general efficiency of the school organization.

For the last three years information has been filtering through to the Foundation office concerning Federal aid which has been obtained by some state schools for the blind for the improvement of their plants. However, this information was fragmentary and not in such a form as to give a clear picture of what was happening. In order to be able to give a more detailed report, the Foundation sent a questionnaire to all of the schools in the United States asking for information about the amount of Federal money already used or allotted and the types of projects, completed or under construction, which have been made possible through Federal aid. The facts stated below are the results from answers received to date. They represent reports from nineteen schools.

TABLE I

Name of School	Project	Allotted Federal Funds
Alabama Institute for the Deaf and the Blind	1. Paved sidewalks and athletic field	$7,200.00
	2. Construction of gutters and surfacing of drives. Alterations in boiler room and a large addition to the main building	5,496.55
Arizona State School for the Deaf and Blind	1. Painting and repairing, building storeroom	12,000.00
	2. Cottage for Superintendent	26,000.00
	3. Toolhouse, teaching, work on grounds	
	4. Classroom bldg. (Loan & grant)	90,000.00
Arkansas School for the Blind	1. Repair hospital, dormitory Bldg. recreation hall for boys Bldg. walks and steps	7,000.00
California School for the Blind	1. Painting interior, girls' house Painting exterior. Landscaping Grading and excavation, playground Roadways Clearing, making walks &	32,000.00

TABLE I (*Continued*)

California School for the Blind (*Continued*)	ditches Concrete work Art project Bldg. Boy Scout hut and lath house	
Indiana School for the Blind	1. Interior decorating Roadways, drainage, Landscaping 60 acre plot	170,000.00
Iowa School for the Blind	1. Fireproofing attic, main bldg. 2. Water distributing system 3. New boiler, stoker, etc. 4. Architects drawings, administration, etc.	9,324.54 5,058.88 6,658.20 712.84
Louisiana State School for the Blind	1. Painting exterior, dormitories	1,200.00 (approx.)
Michigan School for the Blind	1. Transcribing print books into braille for school libraries	37,000.00
Minnesota School for the Blind	1. Heating systems: repair and additional installations in 3 buildings 2. Electrical repairs and changes 3. Painting, exterior 4. Boiler repairs 5. Brailling library catalog 6. Clerical work 7. Landscaping 8. Nursery school (teacher)	1,743.00 1,600.00 2,400.00 143.00 408.00 202.95 150.00 585.00
Montana School for the Deaf and Blind	1. New building (loan)	175,000.00
New York State School for the Blind	1. New concrete road an campus	Info. on cost not available
North Carolina State School for the Blind and the Deaf	1. Replacing porch roof, White Dept. 2. Playground, White Dept. 3. Grading campus, Colored Dept. 4. Forestry work, Col. Dept. 5. Playgrounds, Col. Dept. 6. Bldg.—Engineer's and Servants' quarters, Col. Dept. 7. Painting, exterior and interior, Col. Dept. and interior, White Dept. 8. Forestry work, White Dept.	875.00 8,741.25 7,650.00 1,807.50 11,008.75 10,057.66 19,887.00 900.00 (Est.)
Oklahoma School for the Blind	1. Industrial building and alterations on cottages and hospital	15,708.00

TABLE I (*Continued*)

Oregon State School for the Blind	1. Remodeling auditorium and making athletic field	9,728.28
	2. Boys' dormitory	31,950.00
South Dakota State School for the Blind (Institution paid for materials; Fed. Funds for Labor)	1. Artificial lake and dam	2,500.00
	2. Painting and repairing bldgs.	1,500.00
	3. New barn and part of tunnel	3,000.00
Utah School for the Blind	1. Boys' dormitory	31,500.00
Washington State School for the Blind (State paid for materials; Fed. Funds for labor)	1. Primary dormitory	32,800.00
	2. Water and steam line	
	3. Painting interior	
	4. Grading running track	
West Virginia School for the Deaf and the Blind	1. Health project	4,500.00
Wisconsin School for the Blind	1. Interior painting and refinishing and carpenter work	2,361.60
	2. Rewiring Music Bldg.	873.60
	3. Improving and beautifying of grounds	480.00
	4. Interior and exterior painting	1,368.00
	5. Removing dead timber from wood lot	2,520.00
	6. Excavating 500 ft. of steam line	1,689.60
	7. Miscellaneous	4,600.00
	a. Removing dead timber	
	b. Removing walls	
	c. Preparing land for seeding	
	d. Repairing and resetting fences	
	e. Relaying drain	
	f. Soil erosion	
	g. Building new silo	
	h. Painting exterior and interior	
	Total	$799,889.20

Because of the variations in the set-up of the Federal agencies in different localities, it was impossible for some superintendents to send in information as to the amount of Federal money expended on certain of their projects. Usually this was due to the fact that the labor for the project was furnished through Federal funds rather than by an outright grant of funds and the schools had no accurate records of the labor cost. In a few instances an estimated figure has been given. Were the cost of this unlisted labor to be added to the figures given in Table I, the total sum expended would be considerably increased. It is also quite possible that some schools have had the use of Federal funds whose reports do not appear in this article.

Of special interest is the diversified type of projects completed or allotted in the various states. The following list shows the wide range of improvements which have been made possible through the funds.

Projects for Which Federal Funds Have Been Received by Residential Schools for the Blind

I. New Buildings or Additions
1. Dormitory—Alabama, Oregon, Utah, Washington
2. Industrial building and alterations—Oklahoma
3. School building and dormitory —Montana
4. Recreation hall—Arkansas
5. Engineers' and servants' quarters—North Carolina
6. New barn—South Dakota
7. Part of tunnel—South Dakota
8. Storeroom—Arizona
9. Toolhouse—Arizona
10. Superintendent's cottage—Arizona
11. Classroom building—Arizona
12. Boy Scout hut—California
13. Lath house—California

II. Buildings, Repair
1. Rewiring—Minnesota, Wisconsin
2. Removing walls—Wisconsin
3. Hospital and dormitory—Arkansas
4. Porch roof—North Carolina
5. General repair—Arizona, Wisconsin
6. Remodeling building for dormitory—Arizona
7. Remodeling auditorium—Oregon
8. Fireproofing main building—Iowa

III. Buildings, Painting Exterior—Arizona, California, Indiana, Louisiana, Minnesota, North Carolina, South Dakota, Wisconsin

IV. Buildings, Painting Interior — California, Indiana, Minnesota, North Carolina, South Dakota, Washington, Wisconsin

V. Landscaping—Arizona, California, Indiana, Minnesota, Utah, Wisconsin

VI. Cleaning Up Grounds—California, Wisconsin

VII. Excavation
1. Steam line—Wisconsin
2. Relaying drain—Wisconsin

VIII. Preparing Land for Seeding—Wisconsin

IX. Repairing and Resetting Fences—Arizona, Wisconsin

X. Soil Erosion—Wisconsin

XI. Razing Old and Building New Silo—California, Wisconsin

XII. Plumbing — Alabama (boilers), Iowa (boilers, stokers, etc.), Minnesota, Washington (steam line)

XIII. Brailling Reading Matter—Michigan (books), Minnesota (library catalog)

XIV. Extra Clerical Work — Minnesota

XV. Extra Teacher Help — Arizona, Minnesota

XVI. New Water Tower and Water Distributing System—Iowa

XVII. Sidewalks — Alabama, Arkansas, California, Indiana

XVIII. Playgrounds and Athletic Fields —Alabama, California, Indiana, North Carolina, Oregon, Washington

XIX. Resurfacing of Drives and Building of Gutters—Alabama

XX. Braille Botanical Garden — Indiana

XXI. Tennis Courts—Indiana

XXII. Roadways — California, Indiana, New York State School

XXIII. Drainage — Arizona, Indiana, Wisconsin

XXIV. Grading—California, North Carolina

XXV. Forestry Work—California, Wisconsin, North Carolina

XXVI. Health Projects—Arizona, West Virginia

XXVII. Artificial Lake—Indiana, South Dakota

XXVIII. Library Check—Arizona

XXIX. Weed Eradication—Arizona

XXX. Irrigation—Arizona

XXXI. Concrete Work, Walls, Gutters, etc.—California

XXXII. —Art Project—California

Many schools have requested funds for further projects, but at the time of writing this report they had not been approved. Undoubtedly some of them will eventually be added to the list given above. Of primary importance, as stated by several superintendents, is the fact that a large number of these projects would not have been possible had they been dependent entirely upon

(*Continued on Page* 60)

THE MEMORY OF BLIND CHILDREN

Samuel P. Hayes

PART I

The "wonderful memory" of the blind is proverbial. The blind poet of ancient Greece, the Japanese college of blind historians, blind musicians with incredible repertoires, and occasional prodigies who can recite any part of the Bible at will are cited as proof. Even experienced superintendents in schools for the blind have given testimony in support of the belief, though teachers of spelling generally vote on the other side. When the Binet intelligence tests were first used with blind subjects, early investigators assumed that the blind would surpass the seeing, and placed the digits tests in earlier years for the blind. Apparently the "fallacy of the single case" has long prejudiced our opinion of the memory of the blind, so that occasional striking examples of superior memory have led us to believe that superior memory is a characteristic of the blind as a class. S. C. Swift[11] gives us a paragraph which might serve as a corrective. "A person without sight recognizes a voice he has not heard for many years, and his memory is instantly hailed as marvelous. The seeing person thus recognized fails to realize that his own visual recognition under similar conditions is every whit as wonderful, and that a blind man is quite as liable to forget a voice as he himself is to forget a face. Pupils in schools for the blind often cause visitors to stand in open-mouthed astonishment at the ease with which historical events and their dates are recited, musical selections rendered, mathematical problems solved, etc. The visitors forget that they themselves are frequently familiar with the same dates, that every properly trained seeing musician plays from memory and without looking at his instrument, and that in the every-day business of life, they themselves solve problems of much greater difficulty without the use of pencil and paper. A blind typist is seen operating a machine with speed and accuracy, and his memory is praised and talked about for years thereafter. The witness of this marvelous feat employs a stenographer in his office, but he has forgotten that the touch system was used in her instruction and that the keys of the machine are never looked at."

Relatively little experimental work has been done directly upon the memory of the blind, but a beginning has been made, and such memory tests as occur in the Binet intelligence scale have been used with large numbers of blind children. The results seem to indicate that some blind children have wonderful memories and some have wretched memories; that blind children as a whole vary widely in this as in other traits; and that when their memories have not been specifically trained or stimulated, their scores take the form of the normal bell-shaped distribution curve, the large majority having memory ability about equal to the average of the seeing, with fewer and fewer cases as we approach either extreme. We certainly cannot assume that blindness will cause an improvement of memory, through some mysterious process of compensation. Some of us, blind as well as seeing, are gifted with unusual retentive ability but most of us acquire a dependable memory by an industrious use of all the hints and helps we can marshall to our aid.

Tests of Memory.

"The phenomena of memory," write Garrett and Schneck,[4] "may be classified under the heads of fixation, retention, recall and recognition. Fixation, or the ability to get new impressions quickly and accurately, is measured by tests of immediate memory. Retention, or retentivity, is measured by tests of recall and recognition, which

may be given at varying time intervals after the original presentation of the memory material. Tests of memory, themselves, may be classified as tests of 'rote' memory, or memory for disconnected impressions; and tests of 'logical' memory, or memory for connected meaningful material. In rote memory tests the subject is required to reproduce the material exactly as it is presented, i.e., he must learn it 'by heart.' In logical memory tests the ideas or meanings involved are asked for, rather than an exact reproduction of the material as presented." We are following the headings used by these authors, in our presentation of the results of tests of the memory of blind children.

I. Rote memory.

A. Simple immediate memory.

The memory span method is commonly used to test immediate rote memory, the memory span being the longest series of items, whether letters, digits, or words, which the subject is able to reproduce correctly after a single presentation.

1. Digits test.

The ability to repeat lists of numbers is one of the standard items in intelligence testing, so we have data from large numbers of subjects, both blind and seeing. Terman's [12] work in standardizing the Binet tests on the basis of 1000 cases, indicated that there is a fairly regular development of this ability up to about 12 years of age, so that by assigning three, four, five and six digits to the tests located in years III, IV, VII and X respectively, he could expect about the same per cent of passing as the difficulty of the test and the years increase. His numerical results are presented in Table 1 below. Terman placed the seven digits test in year XIV and the eight digits test in year XVIII (superior adult), though his data for these years was scanty and he realized that after the early teens memory for meaningless material improves very little and that ability in this function does not correlate closely with intelligence. Confirmation of Terman's results for children in school comes from an article just published by Calhoun [3] on the basis of results obtained by including digits tests in his series of group tests used with 946 subjects "distributed quite evenly through the third to the twelfth grades inclusively, of seven different schools in six counties in central Ohio." Calhoun found that the ability to remember a series of digits long enough to write them down increases quite regularly from the eighth to the fourteenth year and shows little improvement after that age. At the adult level we have several measurements of large numbers of college students which indicate that one may expect them to repeat seven or eight digits, though some writers question the use of eight digits as an intelligence test, regardless of age. "Practice and training," according to Garrett and Schneck, "plays a large role in memory span in the older groups. As a measure of attentive observation and concentration, memory span is of value with young children; but its low correlation with verbal tests of general ability suggests that the digit span has been much over-emphasized in the upper levels of the Stanford-Binet. Investigators are generally agreed that girls are superior to boys in memory span."

Table 1 gives us the data for an interesting comparison of the blind with the seeing. It is, in fact, the first published comparison involving large numbers of blind subjects. This table is to be read as follows: the three digits test was given by Terman to 10 three year olds, 70% of whom passed the test, which he located in year III, as indicated by the line under 3. The same test was given to 17 four year olds, of whom 87% passed. The four digits test was given to 10 three year olds, to 17 four year olds and to 54 five year olds; and the test was passed by 40% of the three year olds who were one year younger than the age at which the test is located, by 76% of the four year olds, "at age," and by 83% of the five year olds, who were one year older than the age at which the test is located.

First comparing the per cents at age, we

note that with the seeing all the per cents for tests with 3-6 digits are in the seventies, indicating that with increase in years, the seeing are about equally successful with progressively longer series of digits; also in each year group the younger children have a lower per cent of passing than those at age, while the children one year above age show per cents in the eighties, thus consistently higher than those at age. With the blind we find a decidedly different trend, from relatively higher per cents with three and four digits, similar attainment with five digits, and lower attainment with six digits. This downward trend persists when the blind are tested with still longer lists of digits, the figures for relatively large numbers of cases indicating that the blind still fall below the seeing as the years go on.

Explanations are somewhat hazardous without further experimentation with introspective evidence from the blind on their methods of responding to this test; it would seem obvious that the young blind learn the trick of retaining short series of digits more readily than do the seeing, but that they cannot, or do not, make the changes in method needed for the retention of longer series, one is tempted to appeal to imagery for an explanation. Possibly with short series of 3-5 digits it does not make very much difference whether one uses auditory or visual imagery; in this case the blind would be at no disadvantage and their habits of attention to auditory stimuli might explain their superiority. With larger numbers of digits visual imagery might be progressively more to the advantage of the seeing, and we know that, with the seeing, longer series can be retained when presented visually than auditorially. In general we must conclude that this test of retention shows no superiority for the blind—no memory compensation—but rather an inferiority

TABLE 1.

Percent passing the digits tests, at age, and at younger and older ages.

	Three Digits		*Four Digits*			*Five Digits*			*Six Digits*			*Seven Digits*			*Eight Digits*		
Terman: Seeing Subjects																	
Ages	3	4	3	4	5	6	7	8	9	10	11	High School pupils 16-21					
Number of cases	10	17	10	17	54	117	92	100	113	87	79		32			32	
% younger			40			59			56				60			37	
% at age	70			76			74			71							
% older		87			83			83			80						
Hayes: Blind Subjects																	
Ages	3	4	3	4	5	6	7	8	9	10	11	13	14	15	17	18	over 18
Numbers of cases	11	10	7	18	46	82	131	166	130	132	160	205	180	161	126	118	305
% younger			100			64			66			60			52		
% at age	81			99			67			63			57			49	
% older		100			86			76			72			60			53

TABLE 2.

Percent passing the reversed digits test, at age, and at younger and older ages.

	Three Digits			*Four Digits*			*Five Digits*			*Six Digits*			*Seven Digits*		
Terman: Seeing Subjects															
Ages	6	7	8	8	9	10	11	12	13	High school pupils			16-21		
Numbers of cases	117	92	100	100	113	87	79	83	98		32			32	
% younger	35			44			61								
% at age		60			62			66			56			40	
% older			83			75			71		About ½ of average adult			About ½ of superior adults	
Hayes: Blind Subjects															
Ages	6	7	8	8	9	10	11	12	13	15	16	17	17	18	over 18
Numbers of cases	55	108	143	136	173	171	217	212	243	23	65	51	41	73	80
% younger	23			42			51			39			49		
% at age		47			52			48			58			50	
% older			64			62			57			57			30

from about the tenth year onward, and that the occasional blind adolescents who pass digits tests in year groups well beyond the years in which any other tests are passed, even succeeding occasionally with a series of nine digits, are exceptional cases, perhaps endowed with a high degree of that native retentiveness which appears in such a conspicuous form in mathematical prodigies.

2. Reversed digits test.

While related to the simple digits test in material used and in the employment of the memory span method, the repetition of digits in reverse order appears to make demand upon somewhat higher functions than the direct digits test. This test was first standardized by Terman[12] p. 207.

"It is very much harder," he writes, "to repeat a series of digits backwards than in the direct order. Five digits can be given in the direct order at year VII, and six at year X. Reversing the order places three digits in year VII, four in year IX, five in year XII, and six in 'average adult.' Even intelligent adults sometimes have difficulty in repeating six digits backwards, once in three trials. As a test of intelligence this test is better than that of repeating digits in the direct order. It is less mechanical and makes a much heavier demand on attention. The digits must be so firmly fixated in memory that they can be held there long enough to be told off, one by one, backwards."

Table 2 gives the results for this test, comparing Terman's results with those of much larger numbers of blind subjects. The table is to be read in the same way as Table 1. As in the former table, we find the seeing subjects passing the test about equally well in each age group up to the early teens, but showing less success with six and seven digits in the high school period. With the blind, however, we find a trend which is different from the seeing, in that the youngest children have the most difficulty and are distinctly inferior to the seeing while the blind equal or surpass the seeing when tested with six or seven digits in the later teens. Moreover the trend for the test with reversed digits given to the blind is almost the opposite of that found for digits given directly: in this test the blind are poorest in the early years and improve as the years go on; in the test with digits reproduced in the same order in which they are given, the blind are best in the early years and are less successful as the years go on. Terman[12] p. 209 was inclined to explain success in the reversed digits test "by the ability to translate the auditory impression into visual imagery, so that the remembered numbers could be read off as from a book," and noted that children were more likely to succeed if they took time to think through the series two or three times in the direct order before attempting the reverse order. But since many of the blind are unable to depend upon visual imagery, and yet as a group succeed better than the seeing in handling the larger series, even reversing eight digits as demanded in Mr. Irwin's early revision of the Binet tests and frequently repeating as many in reverse as in the direct order, we must assume that they have made some intelligent substitution for visual imagery.

On the basis of the facts at our disposal we must conclude that blind children are superior to the seeing in repeating short series of digits in direct order, and long series of digits in reverse order; they are inferior to the seeing in repeating long series of digits in direct order and short series of digits in reverse order. So far as compensation is concerned, it would appear that with digits in direct order, they have not succeeded in discovering any method by which they can compete with the seeing in retaining lists of digits which approximate in length their auditory memory span. With digits in reverse order, however, they have overcome the handicap shown in the early years, whatever that handicap may be, and in later adolescence equal or excel the seeing.

3. Immediate memory for disconnected words.

When psychological testing was begun in the eastern schools for the blind, nearly twenty years ago, group tests of rote memory were among the first to be tried. Preliminary testing with the Pyle[10] rote memory test, (in which lists of short, unrelated, concrete and abstract words were read to a grade, with pauses after each list to give time for the pupils to write the words) showed the blind of three schools inferior to the seeing, whether compared by grade, physiological age or mental age, but the test was criticized on the ground that many of the words used were probably less familiar to the blind than to the seeing and so more difficult to remember. In 1919-20 about 450 pupils in from 8-10 schools for the blind were subjected to a large number of group tests and the results published in 1921 by the writer,[6] in "Self-Surveys in Schools for the Blind." Two of the tests used were memory tests, from Pressey's Group Point Scale.[9] His rote memory test was given as follows: After the pupils had written their names, age, grade and the date at the top of their record sheet, the tester said, "Now I want to see how well you can remember words that I read to you. Please listen carefully as I shall read the words only once. Do not write while I am reading; wait till I am through and then write what I tell you to write. You may write across your lines till I tell you to start a new line. The first list of words is,—Cat, BABY, cow. What word came after baby?" After another sample the test was begun with a list of four words. Three lists of four words were given, five lists of five, six and seven words, three lists of eight words, one list of nine words and one list of ten words.

This is one of the very few group tests in which blind children get higher scores than the seeing. As arranged by Pressey, the test began with a list of three words and ended with a list of seven; but preliminary tests in two large schools for the blind gave so many perfect or nearly perfect scores that we felt the test was too easy for the best pupils, so Pressey's two-word lists were omitted, and his three-word lists used as examples, which were not counted in the score. At the end of the series new lists of eight, nine and ten words were added, and throughout the lists certain words were stricken out as not likely to enter into the experience of blind children. When a Supplement[7] to the Self-Surveys was printed in 1925, the results obtained from 615 children from ten years of age in two schools for the blind were reported. The curve for the blind was well above the curve for the seeing in every age group, but the greatest superiority of the blind appeared in the early years. From these results it would seem that at ten years of age blind children have mastered much better than the seeing, the ability to hold in mind a series of discrete auditory stimuli (perhaps because they get so much more of their education in and out of school through the use of their ears); and that on the average only a slight improvement is to be expected in the years after. Ten year olds are likely to get a score of 10, and at eighteen years the average score is only 12. But we find individuals at ten years with a score of 12, at eleven with a score of 16, and scores up to 19 at seventeen and eighteen. Possibly this test measures a memory ability which does not ordinarily increase very much after the early teens, as was noted in the direct digits test. We have no records of this ability for the years below ten, as children in the earlier grades are not familiar enough with the writing of braille to justify the use of such group tests.

(Part II will appear in the March issue.)

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Carolyn S. Bailey & Clara M. Lewis

e. *Book House* — Olive B. Miller

f. *Stories for Little Children* —Lucy Wheelock

g. *Pathways in Science* — Craig

h. Public School Methods
i. Magazines
2. Grade II
a. *Selections From Nature and Verse*—Mary I. Lovejoy
b. *The Blind Child and the World of Nature*—Dorothy Dean Sheldon
c. *Stories of Bird Land* — Annie Chase
d. *The Burgess Bird Book for Children*—Thornton W. Burgess
e. *Nature Study Book*—Books I, II & III—John Bradford Craig
f. *Nature and Myth*—Flora J. Cooke
g. *Pathways in Science* — Craig
h. Radio
E. Hygiene:
1. Grades I and II
a. Health Lessons, Stories and Games — Supplied by Dairy Council, Phila.
b. Plan Book — Marion M. George
c. Health Lessons from Radio
d. Health Lessons—Pamphlets dictated by Miss Jessica Langworthy, Perkins Institution.

(*Continued from Page 54*)

state funds. The fact that the Federal Government would furnish part of the funds acted as a leverage by which state appropriations were made for projects that otherwise would have been postponed for years.

One branch of Federal assistance which as yet does not seem to have been used widely by superintendents is the National Youth Administration. Only two schools reported assistance through this channel. Superintendent Bradley S. Joice of the Western Pennsylvania School for the Blind reports that through the NYA set-up they have been able to employ a University of Pittsburgh student to catalog all ink print books and pamphlets at the School. Superintendent Walter R. Dry of the Oregon State School for the Blind states that four students from Willamette University are giving approximately thirty hours a month each to his school, and they are paid from the NYA. One student is assisting in the coaching of the school wrestling team; another is teaching voice in the music department; while two young women are transcribing material into clear type by means of large type typewriters for students with sufficient vision to use it. Mr. Dry reports that lack of sight conservation classes throughout Oregon due to the fact that it is primarily a rural state necessitates a considerable amount of such work to be done at his school.

THE TEACHERS FORUM
for
Instructors of Blind Children

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The Editor will not be responsible for opinions expressed in signed articles.

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In place of the regular editorial by an educator of blind children, an analysis of Federal funds as used in schools for the blind is printed in this issue.

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

Vol. VIII March, 1936 No. 4

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TEXAS SCHOOL FOR THE BLIND CHILD ACCOUNTING SYSTEM

W. E. Allen

In order to clarify the presentation of a Child Accounting System for this special type of institution, it will be necessary, first, to expose briefly the kind of organization, the character of individual to be educated, and the governmental status of the institution. For convenience, the school may be divided into several departments: literary, music, vocational, health, and home-life. The school proper consists of a kindergarten, seven elementary grades, and four years of high school. There is an opportunity and adjustment section maintained for the benefit of the temporarily unadjusted pupil. Throughout the elementary grades the enrollment varies from fifteen to twenty pupils for each teacher who is responsible for the schooling of all the pupils in her grade, promotion being dependent upon the making of a general average of 75 in all literary subjects. The departmental plan of instruction is followed during the four years of high school which automatically provides for promotion by subjects. The high school is recognized by the State Department of Education as one of the first class, and is awarded a standing of twenty college entrance credits. Although the blind are not exceptionally musical, as is often supposed, eight music teachers are employed for the purpose of giving individual lessons in a variety of courses to those who may elect music as an extra-curricular pursuit. Vocational training is offered in those occupations to which the pupils are particularly adapted. The total enrollment of the school is approximately 225, and all of the subjects which are offered appear on the schedule of a regular school day. A physician, an oculist, and a dentist spend a portion of their time in maintaining the general physical welfare of the student body. During the time of illness, the pupil reports to the school hospital which is under the constant supervision of two nurses. Outside of school hours the pupils are housed in well equipped buildings in which a near approach to actual home life is experienced by them. The institution is open for nine months of the year to the blind from six to twenty-one years of age, and is financed by appropriations made by the legislature from the general revenues of the State plus the regular per capita apportionment which it receives as an independent school district. The State Board of Control serves as a governing body, and the school is known as an eleemosynary institution because of the nature of its purpose. It is obvious, therefore, that a child accounting system will be of considerable value to all concerned.

In fulfillment of the requirements of child accounting, this system embodies the following features:

1. It provides for a complete record of each individual.
2. It provides for recording only data having definite value.
3. It is checkable.
4. It does not conceal school conditions.
5. It provides for instantaneous reference to data.
6. It provides for central office control of accounting.
7. It is so organized as to keep the individual pupil and his educational welfare in the foreground.

The Texas School for the Blind Accounting System consists of ten forms, each printed on a good quality of heavy buff ledger paper. The page size of the forms is uniformly 8½ inches by 11 inches, adaptable to any standard vertical letter file. Any possible confusion of the separate individual records is avoided by the use of a simple Filing-Folder, which will also permit the placing of the record flat in the drawer of the teacher's desk. The following is a list of the forms:

Form 1, Personal and Family History;

Form 2, Pupil Daily Record, Elementary; Form 3, Pupil Daily Record, High School; Form 4, Pupil Cumulative Record, Elementary; Form 5, Pupil Cumulative Record, High School; Form 6, Case Study, Opportunity Room; Form 7, Teacher's Annual Report; Form 8, Dormitory Activities, Cumulative; Form 9, Health Record, Physician; Form 10, Health Record, Oculist, Dentist, Nurse.

The data on Form 1, Personal and Family History, is secured from information found on the Application for Admission to the school.

Form 2, Pupil Daily Record, Elementary is used for keeping the attendance and scholarship of one elementary pupil for one school year. At the close of the year, the summary of the pupil's attendance and scholarship should be posted from this form to Form 4.

Form 3, Pupil Daily Record, High School is used for recording the attendance and scholarship of one high school pupil for one school year. At the close of the year, the summary of the pupil's attendance and scholarship should be posted from this form to Form 5. Both Forms 2 and 3 are placed in the hands of the respective teachers at the beginning of the school year.

Form 4, Pupil Cumulative Record, Elementary, contains the cumulative record of one pupil throughout his elementary school career. This form should be kept in the central office until the end of the year at which time it is sent to the teacher who files this sheet alternately with the Pupil Daily Record sheet until the necessary entries are made. As soon as Form 4 is properly posted, it will be returned to the office from which it came.

Form 5, Pupil Cumulative Record, High School, furnishes a cumulative record of a pupil throughout high school. This form is placed in the hands of the teacher at the end of the year in order that the data from Form 3 may be properly posted, after which Form 5 is returned to the central office.

Form 6, Case Study: Opportunity and Adjustment Room, is given to the teacher at the end of the year. This form is cumulative and contains information taken from the Pupil Daily Record and from data of Tests given. It is then returned to the central office.

Form 7, Teacher's Annual Report, contains all information necessary to the completion of the superintendent's annual report to the State Department of Education, and is presented to the teacher at the end of the year. Such information should be obtained by compiling the data enumerated on Pupil Daily Record sheets. Form 7 is also returned to the central office.

Form 8, Dormitory Activities, contains information concerning the home life of the child including the activities of his entire school career. The supervising teacher of the cottage is responsible for the making of this report.

Form 9, Health Record, Physician, and Form 10, Health Record, Oculist, Dentist, Nurse, are cumulative and contain information relative to the general physical condition of the pupil. These forms are given to the nurse at the beginning of the year before the clinic is held in order that she may post information obtained. These forms are returned to the central office until the close of the school year at which time the nurse completes her portion of the report and special treatments given. Forms 9 and 10 are signed by the attending examiner before they are again returned to the central office.

In conclusion, it will be observed that at the end of each school year an up-to-date cumulative record of each pupil is filed in a Filing-Folder in the central office which is known as a live file; and that at the end of the discharge of the pupil from the school, his complete record is placed in the inactive file.

Editor's Note: Those interested may obtain samples of these forms by writing to Mr. W. E. Allen, Supt., Texas School for the Blind, Austin, Texas.

INDIVIDUAL DIFFERENCES AND THE PHYSICAL EDUCATION PROGRAM

R. E. Trudel

The matter of individual differences and the method of providing for them is of superlative importance to society. It should be recognized that no two people are exactly alike, and that failure to take individual differences into account in educating children results too often in emotional instability, inferiority and superiority complexes, rationalization, and torture of mind and body. It is a situation for which we, as school people, are responsible when we have pupils in our classrooms branded as failures although they do the very best they can. I feel that it is little short of criminal negligence to develop inferiority complexes in our slow pupils and superiority complexes in our quick ones, because neither type of complex is resulting in good for the youth of our land. Because we as educators fail to take individual differences into account, and adjust our programs accordingly, our slow pupils develop inferiority complexes and all their attendant evils while the bright too often become self-satisfied and lazy.

Consideration of the problem of adjusting our program to meet more nearly the needs of the pupil brings up questions as to the practicability of adjusting it to individual differences. Some of the more progressive public schools are endeavoring to meet the situation by giving tests to determine the intelligence of their pupils and medical examinations to determine their physical condition. These tests and others, together with investigation of the home environment of the pupils, are studied with a view to adjusting the school environment to the pupils. Requiring uniform achievement means waste of time and effort on the part of the pupils and teacher, and waste of possibilities of the pupils becoming useful, happy, well-adjusted citizens. Several methods of providing for individual differences have been put in practice in various places and named different things, but most of them fall into three general groups, with possible combinations of the three in some instances. These are: varied assignments according to the ability of the pupil; individual or laboratory instruction including use of work-books with the text; and help for the backward pupil. Probably none is perfect; in some cases where special help is given the slow pupil, probably the bright pupils are neglected. The individual or laboratory method is rather expensive. Progressive educators are advocating more pupil activity, with studies of the pupil's environment, his interests, and capacities being made and recorded throughout his school life so that he may be best fitted for the life he is to lead when he leaves school. The purpose is to guide him into activities which seem best fitted for enabling him to lead a useful and happy life.

One great need of our schools for the blind is better guidance. It is very important that guidance be used with an aim to fit the pupils for earning their living in congenial surroundings. French, in his chapter on Vocations and Avocations of the Blind, in his book, *From Homer to Helen Keller* makes the following statement: "It is wrong to start with the school as Haüy did, and to teach there a number of occupations that the blind can do, but to teach them out of relation to their practical and relative values. . . . Only a far-reaching survey can show for what occupations the blind are best fitted, taken individually; and, equally, what occupations offer satisfactory return as life callings. Such a survey would have to take into consideration the vagaries of invention, the fact that the hand operations of today may be thrown on the scrap heap tomorrow, and choose those occupations that have the greatest possibility of continued existence as well as the readiest market for products."

Achievement tests and their correlation

with intelligence tests will indicate whether a pupil is trying. Tests of special aptitudes should be used in connection with a continuous record card to give a real idea of the child's ability and tastes. In residential schools for the blind, capable teachers are able to find splendid opportunities for effective counseling. These teachers may also correct individual personality problems to a large extent by cooperating with psychiatrists and clinical psychologists. Personality training is most vital, because upon the result of this adjustment depends society's acceptance or rejection of the student. Blindisms, speech disorders, inadequate sex instruction, and emotional blocking, all of which contribute to personality difficulties, are things that can in a large measure be corrected by the well-trained teacher who has proper help.

Great variations in intelligence and school achievement of individual blind pupils suggests a need for variation of our school program to meet individual needs in instruction. Kathryn E. Maxfield, working as research psychologist with the American Foundation for the Blind, after conducting extensive tests showing retardation of blind pupils, said, "Most of the problems which are raised by these tests resolve themselves into the one big problem of curriculum management." Tryout courses in agriculture for those who live in farm homes and rural communities have been suggested for seventh and eighth grades. Other courses to show desires and aptitudes of pupils should be tried out. How to organize plans whereby pupils can proceed according to their ability and do it in a reasonably economical manner seems to be the big problem in instruction. Only such plans will meet the needs of our pupils in a satisfactory way.

Teachers of the blind have a harder job in this respect than do those who teach in public schools. It is not unusual to find blind children who come to our schools very selfish due to having been pampered and always allowed to have their own way. Because they have been permitted to eat as they please, and also because in many cases their parents or guardians do not know what they should eat, many of these young children come to us with bad food habits. In many cases they know neither what they should eat nor how to eat. It is vitally important that they have proper teaching of diet in the very early grades as at this time good habits are most easily fixed. We are all well acquainted with the problem child who wants to eat only a few things. Merry in his book, *The Education of Visually Handicapped Children,* points out that the importance of correct diet has not been recognized by most of the residential schools for the blind due to insufficient knowledge of the science of dietetics. Incorrect diet is the cause of some eye troubles. Correct diet is much more essential for the blind than for seeing children due to the generally poorer physical health of the blind. These children's individual differences in respect to tastes in food will almost entirely vanish when we begin teaching them correctly and insisting that they eat a sufficient variety of foods to promote health.

The blind are not all alike. True, many are absolutely alike in respect to having lost their vision, but in all other ways they differ greatly from one another, physically, mentally, morally, and emotionally. All these factors and others need to be carefully considered in providing for their welfare. Blindness decreases the spontaneous reaction of the individual. The tension that is the cause of much of the emotional trouble of some of our blind pupils can be overcome to a great extent by providing them with interesting games that may be played without danger of injury and in which freedom of movement is encouraged. Plenty of open space in which to exercise freely is absolutely necessary for their proper physical development. Because sound bodies make for sound minds and also because many of our blind school children are far from being up to the general average in health

and vigor, it is imperative, if we are to meet their needs, that we get busy with physical health programs. There is an inclination on the part of most people to think of the physical as something entirely apart from the mental, but tenseness of the blind physically is closely related to their emotional instability. As their physical beings react to their environment, so in a great measure do they think. If they feel well they are inclined to think pleasant, happy, joyful thoughts, but ill health stimulates mental despondency. Because of the great variations in these blind children it is necessary for their welfare that all these factors be considered in the school program.

In a program of physical education there is the possibility of doing a great amount of harm to the physical, mental, moral, and emotional make-up of the individual by untrained, unskilled teachers. This is true in groups which we do not ordinarily think of as being handicapped, but it is truer in the case of the blind because they do not come to our schools as emotionally stable or as physically sound as are the children who attend public schools. This makes it especially important that the individual differences in our children be considered and provided for. These differences are not only variations in degree of blindness, but also in kind of eye trouble, posture, age, sex, strength of heart, bodily defects, and also differences in emotional make-up due to blindness, environment, and heredity. It is to be recommended that the school doctor give a medical examination to each child at the beginning of the school year and that a record of each child's health be given to the physical director in order that he may fit his program to the needs of the individual pupil as far as possible. Exercises for children with heart trouble should be given as prescribed by the doctor and such children must be carefully watched to see that they do not over-exert themselves.

It is essential, if we wish to be in good accord with best educational practice, that we have each child examined at the opening of school by a medical doctor, opthalmologist, a trained laryngologist, dentist, and psychologist, and that their recommendations be placed in the hands of all his teachers with special information for the physical education teacher in cases of unusual variation from normal health. These examinations should be given at regular intervals throughout the year. The physical education teacher, to deal properly with the different types of children, should have a good understanding of the fundamental laws of psychology.

If we have a child under our care whose emotional life is unstable we may be sure that it is affecting his whole being. Individual differences not adjusted properly, emotional instability uncorrected, weak constitutions not made strong, result in maladjustments in vocational and social adaptation. Many of these maladjustments arise from physical troubles which could and should be corrected. It is imperative that those in charge understand that in reality there is such a close connection between mind and body, that they are inseparable, and that neither can be influenced without the other being affected. There is need for the physical educator to know the physiology and anatomy of the human body, the biological differences in boys and girls in order to understand how important it is that their programs should be different.

The activities of the physical education program are in three general fields; namely, play, instruction, and correction. In each of these fields, it is necessary that both group and individual differences be provided for. Grouping by departments or even by grades will not be satisfactory because of differences in maturity found very frequently in the lower grades. There is no big difference in general body conformation of boys and girls up to ten years of age, and exercises that suit one group will probably suit the other. Beyond this age group, due to the fundamental differences in metabolism

and general body conformation of the two sexes, it is necessary to provide different kinds of physical activity.

It is possible for boys with some vision to play touch football and to include one or two men on a side who have hardly any vision. Those who have no vision are capable of wrestling and swimming on practically even terms with the seeing. Tug of war contests require no sight. Most physical activities, in the way of competitive athletics, must be adjusted to the sight of the child if he is to cooperate successfully. For instance, in the running broad jump, the point of take off is used in measuring the jump rather than a line. Certain conditions of the eye forbid any kind of violent exercise because of the danger of causing total blindness, while many cannot exercise strenuously because of heart conditions. Some of our pupils walk with a posture so upright that they tend to lean backward. This has its cause in fear which should be corrected if possible. Others lean forward and tend to become very stooped. Still others have the typical drooping posture characteristic of the aged, feeble, and undernourished.

Each of these postures calls for some corrective work supplemented by instruction and play. Flat feet are more prevalent among blind people than among seeing people. This tendency can be corrected in many individuals by proper exercises. Making up a game of letting boys or girls see who can pick up the most marbles with their toes in a given time is one means of making corrections through play activities. Such a game as "Heel and Toe Relay" is good to prevent walking with feet pointed outward, and yet it will be played with enthusiasm and will correct emotional tension as it is being played. It is essential in the playing of corrective games that the instructor insist upon good posture.

However, the physical educator, regardless of how well trained he may be for his

(*Continued on Page 76*)

FOUNDATION LIBRARY

The United States Office of Education has sent out as its Bulletin No. 7 the pamphlet "Coordination of Effort for the Education of Exceptional Children"; the report of a conference called by the United States Office of Education, compiled by Elise H. Martens, Senior Specialist in the Education of Exceptional Children. Among the questions which were taken up at the conference were: What are the major problems in which the office of education can be of assistance to the various groups of exceptional children; In what ways can representatives of the various groups of exceptional children be of assistance to one another; How can the Office of Education and representatives in the field work together towards a better coordinated program for all groups of exceptional children.

Bulletin No. 1 of the National Institute for the Blind, London, England, is called "Blind University Graduates" and is a discussion of the success attained by blind students in institutions of higher learning and in later life. There is a list of blind university graduates between the years 1884 and 1934, giving facts about later careers.

The *Survey Report* of the Cincinnati Public Schools made by the United States Office of Education at the request of the Cincinnati Board of Education and the Cincinnati Bureau of Governmental Research devotes a chapter to the education of exceptional children. The chapter concludes with a Summary of Findings and recommendations.

Development and Problems of Musical Notation for the Blind by Alexander Reuss has recently been translated from the German by Ellen Kerney and Merle E. Frampton. The pamphlet is sent out as Monogram No. 1 of the New York Institute for the Education of the Blind Series. The aim of the Series is to make available to workers and students in the field of the education of the blind, literature from other languages and worth-while English publications dealing with methods of teaching the blind.

DOCTOR ALLEN SAYS:

OUR LAST HALF CENTURY IN A NUTSHELL

By 1885, when I entered the field of the blind, Britain had settled her type question, while America was still using the Roman line. But our contest between that and point, already vigorously advancing, brought about in the 1890's the braille writer, the kleidograph, and especially the epochal stereotypers which, replacing printing from movable type, multiplied the publications of embossed books and music, particularly the American Printing House; while the setting up of home printeries made feasible day classes for blind pupils in city public schools. We were about to open kindergartens and so to lower the age of admission into our institutions. The education of Helen Keller was presently to show the astonishing result of the interaction of ideal pupil and ideal teacher.

Following the turn of the century came the A. A. W. B., blind-officered but cooperating with the existing A. A. I. B., the endowed Ziegler Magazine, regional circulating libraries and that boon, the free mailing of books for finger-reading; also our first large-scale recognition of the adult blind through the gathering of statistics and their application by associations and commissions, the means of help being diversions, home teaching, summer schools, training in handicrafts, employment at home or in sheltered shops and even placement in industry outside. Then too, appeared our unifying organ, the *Outlook for the Blind,* and the lay-professional movement for preventing blindness, first through laws for checking eye impairment from babies' sore eyes, that scourge which had been the schools' chief feeder. One institution after another having changed its title to school, many which had become city-bound, expanded in suburban locations where they presently introduced field sports, school competitions and other activities which, replacing pupil over-introspection and ennui, ushered in a new atmosphere and a new life.

With the World War arrived the far-reaching mental testing of our children, the sight-saving centers in the public schools, whose multiplication became part of the national movement for the prevention of blindness—our hope for the future. Then arose too the wide-spread movement among women of leisure to assist the war-blinded through hand transcribing into braille of special stories, and locally, blind students, through systematic readings, volunteer activities mutually meaningful, giving not charity but continued personal effort, a sympathy that counts.

In 1919 appeared Best's labor of love, *The Blind,* a compendium of everything about them and their cause in the United States; and in the 1920's French's Historical and Critical Study of our special education, also a unique contribution. Then, too, came research, a free correspondence school, The Seeing Eye dog escort, the open sesame radio, the talking film, and that clearing house of our activities, The American Foundation for the Blind, which has brought about both improved and new instrumentalities, such as Weeks for the Blind, type agreement with England, an unprecedented shower of fresh reading in braille, and the Talking Book. A modest movement for the required preparation of teachers of our specialty and for its educational recognition then emerged; also an experimental school. In 1931 followed our first World Conference of Workers for the Blind. Finally there were held in 1932-33 the centenary celebrations of our three pioneer schools.

Verily this second half-century has seen succeed in rapid crescendo events of much moment to the education and employment of our blind and to the cause of all blind people.

BLIND PUPILS IN PUBLIC SCHOOLS

M. Genevieve Coville

For a number of years it has been the policy of the Virginia School for the Blind to transfer to the public school system certain of her pupils. This transition usually occurs at the termination of the second year in high school, and is dependent upon many factors.

The first consideration is accessibility to a good, accredited high school. Unless the student's education can be continued at the same high standard as that maintained at the Virginia School, the transfer is not made. Next, the pupil's abilities and skills are studied and evaluated.

A certain boy or girl may have outstanding musical talent, but less than average ability along literary lines. His home environment may be such that his musical training would have to be discontinued were this pupil to leave the school for the blind. In such an instance, the recommendation for transfer is withheld. In other words, if the pupil's skills and abilities are such that his future success is dependent upon training other than literary, he is retained at the Virginia School as long as seems feasible in accordance with the policy of administration.

Not least among these considerations is the personality of the pupil. Upon first thought it might be presumed that the child of timid and sensitive tendencies would be the one advised to remain at the school. On the contrary, however, that is the child who will benefit most from the contacts to be encountered in the public school. He needs that assurance and self-confidence which results from overcoming his timidity in the new environment.

The proposed change seldom meets with the spontaneous approval of either parents or pupil. From the viewpoints of both, this is a natural reaction. There is a reluctance on the part of the parents to see their child thrown out upon his own resources, into an environment strange to him, and placed in what seems to them, a position of disadvantage. On the part of the child, is that tendency to inertia and that lack of initiative which is characteristic of many of the blind. There have been instances where the parents have taken drastic measures to compel the school to retain the pupil. Within a few months after his entrance into the public school, however, enthusiastic letters of the child's progress begin to be received. These are later supplemented by expressions of appreciation and gratitude that the initial step was taken by the school.

Nor is it easy for the school to release these students. They are among the most promising and aid very materially in the programs and activities of the school. Nevertheless, paradoxical as it may seem, it is a policy which reacts to the mutual benefit of both the individual and the school. Those pupils who remain at the school are given greater opportunities for leadership and must assume greater responsibilities.

The underlying purposes and the resulting benefits of this plan are readily apparent. By removing the pupil from contacts with the blind, he overcomes many of his "blindisms" and has the opportunity to put into practice many of the suggestions made to him during his residence at the school for the blind. He becomes acquainted with a new world and gains poise and assurance from mingling with seeing pupils of his own age and interests. Then, too, a confidence and self-respect are developed as soon as he finds he can hold his own in the classroom competition. This prepares him for competition with the non-handicapped in after life.

The friendships made with the boys and girls of the public schools open up new possibilities. There is probably no other one factor which contributes to a greater degree to a person's general well-being than the

association with and encouragement of his friends; and in no place are firmer or more lasting friendships formed than during the school life of the child. Since the blind child must eventually carry on his life's work in competition with the seeing persons who are now his contemporaries, how desirable it is that these contacts be made as early as possible. The blind child gains an understanding of the attitudes of his seeing companions while they, in turn, gain an added inspiration and incentive from him. This helps to bridge the gap from the school for the blind to college life.

The transfer of blind students to public schools also educates the public as to the abilities of the blind. It portrays the character and the standards of the school for the blind, revealing it as an educational institution whose aims and ideals are not different from those of our best public school systems.

Students who graduate from the Virginia School for the Blind enter our leading colleges and universities without further examination. Those who leave to attend public schools are entered on the same basis and are given full credit for high school work completed. That the public schools are justified in this has been adequately proved, not once, but in practically every instance.

This policy has long since passed the experimental stage at the Virginia School. Seven years ago, five students left the school to attend public high schools. All graduated at the scheduled time. One young man of this group, after graduating from Portsmouth High School, entered the University of Virginia. In June, 1933, he received two degrees, B.A. and LLD.B. He has been on the Dean's list, with the privilege of optional class attendance, nearly every semester of his attendance. Another boy is attending now, a Junior, and is also on the Dean's list. Both of these boys are totally blind. One boy who left in the spring of 1931, graduted from Crewe High School two years later and is now a student at Wake Forest College, N. C. Eight other boys and girls are now attending public high schools at Newport News, Richmond, Roanoke, Salem, Norfolk, and Covington, Virginia. All are doing outstanding work and are a credit to the Virginia School as well as a valuable addition to the schools they attend. Their principals state they are active in orchestral work, debating and literary societies, and are leaders in classroom work.

At every opportunity, these boys and girls return to tell the other students how much this experience has meant to them. This helps, to a great extent, to overcome the prejudice which the blind quite naturally feel in taking the initial step in mingling with the seeing world.

In order to prepare the blind pupils for this step, a systematic program of activities is planned which affords them many contacts with seeing children of their own respective ages. This includes participation in the annual State Literary Contests in which the blind students compete on an equal basis with the seeing groups. No exceptions are made because of their handicap. In these contests, the Virginia School with a total enrollment of less than one hundred in its Department for the Blind, is classed with public high schools having an enrollment of three hundred or more. Last year, both debating teams, the girl reader and the boy public speaker were participants in the semi-finals which were held at the University of Virginia, having won, in succession, over five public high schools to attain this distinction.

Various groups of blind pupils attend the State Conferences of the Y. M. C. A. and of the Girl Reserves. They bring back enthusiastic reports and embody many of the new ideas into their own scheme of activities. During the school session, programs are exchanged with the public schools and the colleges of the city and with the neighboring Military Academies. Each Sunday, chaperoned groups of blind pupils attend the Sunday schools and churches of their preference. They take an active part in the

(*Continued on Page 76*)

THE MEMORY OF BLIND CHILDREN

Samuel P. Hayes

PART II.

(Continued from the January, 1936, issue of *The Teachers Forum.*)

B. Recall memory.

Two common ways of testing recall are the method of retained members and the method of paired associates. In the former more items are presented than can possibly be reproduced by the subject, and the measure of memory is the number of these items which a subject is able to recall. Various kinds of materials may be employed in recall memory tests: words, nonsense syllables, poetry, proverbs, pictures, geometrical figures and actual objects. In the method of paired associates, lists of paired terms are presented, e.g. man-sky, desk-stone, etc. When the whole list has been given, the subject is asked to respond with the second word when the first word of a pair is given. Not only words, but nonsense syllables, digits or pictures may be used as memory material; or a word may be paired against a nonsense syllable, or a picture against a number.

Apparently only four attempts have been made to apply these methods to blind subjects. Krogius [8] in 1905 tried the method of retained members with 20 blind pupils from 10-19 years of age, using as material, nonsense syllables, words and poems. But his subjects were too few to give conclusive results. Bond and Dearborn [2] in 1917 compared a class of 19 boys at the Perkins Institution with 20 seeing boys of about the same age, using four lists of letters and three lists of digits chosen at random. The lists varied from 12 to 15 items. Each list was read once, and then the boys reproduced as many as they could within 30 seconds, the seeing boys writing on paper while the blind boys used braille writers or typewriters. Neither group showed clear superiority. The seeing boys reproduced a higher percent of the items in four of the seven tests, but the authors think they showed more practice effect as their chief superiority was in the final two tests. Vertes [13] in 1919 published results obtained by the method of paired associates, using meaningful material with 20 pupils from 7-14 years of age in the schools for the blind at Budapest, and compared his results with those obtained by testing 200 seeing children in the same way. Vertes also recorded the time needed for each response, using a Jaquet chronometer reading to fifths of a second. He found the blind distinctly superior to the seeing in the percent of responses correctly given, and in the speed of reproduction, and this superiority was shown when the blind and the seeing were compared as a whole, by age groups, by intelligence or by social status. The author notes that the blind attain their maximum ability at an earlier age than the seeing. Table 3 gives his results in simplified form.

TABLE 3.
Percent of correct reproductions reported by Vertes.

						Intelligence			*Social Status*	
Ages	6-7	8-9	10-11	12-13	All	Good	Average	Inferior	Poor	Well-to-do
20 Blind	79.4%	92.3%	89.7%	89.7%	89.7%	92.3%	89.7%	89.7%	89.7%	89.7%
200 Seeing	79.4	83.1	86.4	89.7	82.9	87.1	82.7	76.9	89.4	84.6

The third measurement of the recall memory of the blind comes from Bechtold [1] who in 1925 used the method of paired associates with 50 blind children and 50 seeing children. He used 3 lists of meaningful words, each containing 18 pairs of words and 3 lists of nonsense syllables, each containing 9 pairs of syllables. Each list was read through twice, after which the pupils wrote the second word or syllable of each pair when the first was given. With meaningful material the seeing children were definitely superior, but with nonsense syllables the

blind did much better than the seeing. The author reports similar results when the same experiment was performed by a colleague with 55 pupils in the school for the blind at Chemnitz. He suggests that with meaninful material the seeing perhaps have an advantage because they can retain words as visual images; but that when nonsense material is used the seeing lose this advantage and the blind have a chance to excel because of their better habits of attention to auditory stimuli.

II. Logical memory.

A. Memory for related words in general.

The ability to remember words or the ideas they express, is needed in order to pass most of the tests in the Binet series. An aged person who could not retain impressions long enough to act upon them would make a very poor showing, as would a foreigner of any age who heard but did not understand what the words meant. In some of the tests nothing more is demanded than the ability to recall certain facts already learned, as in the tests for three year olds, in which the child is asked to point to parts of the body, to name familiar objects, to give its sex and last name; somewhat more specialized learning is involved in the ability to count pennies, name the days of the week, or the months of the year, name six coins, or count backward from 20-1. In all of these tests blind children seem to succeed just about as well as the seeing, so these tests have been located in the same age groups.

In other tests of the Binet series, new verbal material is presented to the child, outlining a more or less complicated situation which the child must construct before responding by word or deed. If any of the essential details slip from his memory, he will make a wrong response. Examples of such tests are the Three Commissions, in which the child is given three simple things to do which he must remember and execute in their proper order; the Comprehension tests, in which a situation is created as in the question "What's the thing to do if it is raining when you are out playing?"; Problematic Situations, as in the question, "A little boy is coming into his home crying, and holding an empty bag with a hole in it. What has happened?"; and Absurdities, as in the following, "I know a road from my house to the city which is down hill all the way to the city and down hill all the way back home. What is foolish about that? Blind children succeed as well as the seeing in the Three Commissions and in the simpler forms of the Comprehension test, and their greater difficulty with the others does not indicate that they forget, so much as that they do not understand the situations, as well as the seeing.

B. Memory for words in sentences.

Specific measurement of the ability to retain and reproduce a series of related words is attempted in the tests called Repeating Sentences, which appear in five different age groups. These would be classed as tests of logical memory to distinguish them from the rote memory tests with disconnected words. Terman's results show a fairly regular development of this ability from three to ten years, and the blind appear to test about with the seeing at the only age level for which we have a fair number of blind children tested, at 6 years. Here the tester says, "Now listen. I am going to say something and after I am through I want you to say it over just as I do. Understand? Listen carefully and be sure to say exactly what I say." The child is credited with passing if he repeats one of three sentences like the following without error, or two sentences with not more than one error each. The first sentence is "We are having a fine time. We found a little mouse in a trap." These sentences have from 16-18 syllables. In the tests for three year olds, sentences of 6-7 syllables are given, and four year olds are given sentences of 12-13 syllables. We have records of tests of very few blind children as young

as this. The test for ten year olds, consisting of 20-22 syllables, and the test for 16 year olds, consisting of 28 syllables, are both listed as alternates, and so are not given unless there is some reason for substituting them for the regular list of six tests in these years. On the basis of data now available, we cannot say how the blind compare with the seeing in the Binet tests of Repeating Sentences.

C. Brief fire stories as memory material.

The Binet fire story is used by Terman to measure the ability of ten year olds in reading a simple narrative and reporting eight of the twenty-one "memories" or items covered. The subject is not warned in advance that he will be asked to report what he has read, but as soon as he has finished reading, the selection is put out of sight and the tester says, "Very well done. Now tell me what you read. Begin at the first and tell everything you can remember." Literal reproduction is not expected. The rule is to count all memories whose thought is reproduced with only minor changes in the wording. When this test was first used with the blind, the fire story was printed in braille and N. Y. point and given to the subject to read; but it was found that ability to read by touch varied so widely, irrespective of intelligence, that it was better to read the selection to all children who had not vision enough to read the large, heavy type version of the story printed in the Guide adapted for use with the blind. Possibly the blind are still slightly at a disadvantage in this test since the retention of the details taken in through the ear may be more difficult than when they are read by the eye. We know the memory span for digits seen is higher than for digits heard. But the numerical results are not far apart, 69% of the 87 seeing ten year olds, and 60% of the 112 blind ten year olds being able to pass the test.

In the logical memory test included in Pressey's Group Point Scale another fire story was used, and retention measured by the number of questions on the text which could be answered correctly. Sample questions are: 1. Were the buildings insured?; 2. Was the oldest child overcome with smoke?; 3. Was she rescued by her father? There were twenty questions in all, some of them being "leading questions," i. e. intended to mislead anyone who did not consider them critically, thus testing the accuracy of the memories retained. In this test the curve of results obtained by testing 654 blind children in ten schools for the blind closely paralleled the curve for the seeing, rising gradually from a score of 9 at ten years to a score of 13 at fifteen years. The curve for the seeing first became higher at the 13th year and ended two points higher at the 16th year; but in every year from the 10th onward, there were individual blind children who reached the seeing average for the 16th year, and as early as the 13th year we find blind children who attained the perfect score of 20. One might expect the blind to excel in this test on the ground that they are read to more frequently than are the seeing; but this advantage may be counterbalanced by the fact that the seeing have more chances to visit fires and read newspaper accounts of them, thus having a better basis for associative retention.

D. Stories with many ideas.

Pyle[10] proposed the use of extended stories to test pupils' facility in remembering and reproducing ideas, and suggested that their standing in this test might be a good indication of their ability to remember the subject matter of the school studies. Two of his tests were used at about the same time, Bond and Dearborn[2] testing with the story of the Golden Goose at Perkins Institution and Hayes testing with the story of the Marble Statue in the schools at Batavia and Philadelphia. Following is the text of the Marble Statute with the 67 ideas indicated by lines of division: A young / man / worked / years / to carve / a white / marble / statue / of a beautiful / girl. / She grew prettier / day by day. / He began to love the statue / so well that / one day / he

said to it: / "I would give / everything / in the world / if you would be alive / and be my wife." / Just then / the clock struck / twelve, / and the cold / stone began to grow warm, / the cheeks red, / the hair brown, / the lips to move. / She stepped down, / and he had his wish. / They lived happily / together for years / and three / beautiful / children were born. / One day / he was very tired, / and grew / so angry, / without cause, / that he struck her. / She wept, / kissed / each child, / and her husband, / stepped back / upon the pedestal, / and slowly / grew cold, / pale / and stiff, / closed her eyes, / and when the clock / struck / midnight / she was a statue / of pure / white / marble / as she had been / years before, / and could not hear / the sobs / of her husband / and children. Of course the text must be read smoothly without reference to the division into ideas; the marks serve as a key for scoring. This test was given to 184 blind boys and girls, and when the results were tabulated according to mental age, a very regular upward curve emerged, rising from a median score of six at mental age 6 to a score of 40 at mental age 18. The reason for using mental ages was that at this period little progress had been made in eliminating low grade pupils from the schools, so that curves by grades or physiological ages were exceedingly irregular. When compared with Pyle's results from large numbers of seeing children, we find the curve for the blind taking a similar course and standing intermediate between his curves for city and country children. When compared with the city children, the blind seem about three years retarded, Pyle's curve for the years 8 to 13 being practically the same as the curve for the blind for the years 11 to 16; but this in turn is paralleled by the curve for country children for the years 14 to 18. We cannot conclude therefore, that in this test the blind are either superior or inferior to the seeing as a whole, and as Pyle has over 500 subjects for every year from 14 and large numbers for the other years, his results must be representative.

Bond and Dearborn reached a different result in their use of Pyle's story of "The Golden Goose" at the Perkins Institution. They compared 19 high school boys at Perkins with 20 boys of about the same age in the Rindge Technical High School, 234 pupils in grades II to VIII inclusive in the Houghton Grammar School, 14 students at Harvard and 18 students at Radcliffe in courses of educational psychology. The story was read once to each group, the seeing subjects writing what they could remember on paper and the blind boys using braille writers or typewriters. Five days later all the subjects were asked to reproduce again as many elements of the story as they could. They had not been told that the test would be repeated. Those who had considered the story since the first writing were asked to indicate this fact on their papers, and papers so designated were not included in the results. The results show a gradual increase in ability through the seeing grades, with some superiority for the Rindge high school students; the college students surpassed the latter, while the blind boys clearly surpassed all the other groups. Their first test showed an average reproduction of 87.7% as contrasted with 69.9% for the Rindge boys; their second test showed a 95.9% retention as compared with 92.4% for the Rindge boys. Dearborn explains this superiority of the blind in terms of training: to succeed in school they must be attentive listeners, and in life they will avoid numerous inconveniences and difficulties only if they remember what is said to them.

Our review of the evidence does not reveal any general compensatory superiority in the memory of blind children. In rote memory, where we have the largest number of cases, we find the blind excelling in the short series of digits forward and the long series of digits reversed. They seem to do better than the seeing with nonsense sylla-

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CREATING THE RIGHT ENVIRONMENT FOR THE RIGHT ATTITUDE

Alice C. Chatfield

When the blind child enters our schools for the first time, he moves, in a sense, from dependence to independence. He cannot become independent physically, intellectually or emotionally unless he becomes confident of himself. He needs to learn to get on happily and successfully in a group as much as he needs to learn to think or read and write. Group activities are essential because they stimulate interests and problems as well as teach the child to do his part cheerfully and helpfully. Any cooperative activity, like the building of a house, laying a train track, or playing in the sandbox, by its very nature cultivates a readiness in the child to give up to another and respect others' plans, purposes and temporary possessions. He soon learns that the rewards of life go largely to those who stand on their own feet, who have dropped their infantile behavior and infantile ways of looking at things.

Every year in school ought to mean an advance in these respects. Environments may provide experiences beneficial for the utilization of the child's capacities and interests, or may furnish experiences which stunt his growth or perchance make him an obstacle to the progress of the others of the group. Our school is second only to the home in its influence upon the child in the development of social attitudes. In the complicated and uncertain conditions of today, with war and revolutions all around us, the school cannot ascertain into what kind of a world these children will grow up, but it must proceed to build up the right attitude. We have provided our children with enough, if not too much, subject matter but have had a tendency to neglect the problems of social growth. Right attitude presupposes good judgment and these "knowledge" subjects provide little opportunity for the forming of judgment. We recognize the need for adjustment so the "extra-curricular" activities are receiving more and more attention because they lend themselves to the development of the idea of cooperation and to a sense of responsibility to the group better than the "knowledge" subjects. Naturally, the question arises as to how can one really teach cooperation and a sense of social responsibility in the average classroom? Such opportunities are almost negligible and yet many activities are filled with possibilities of this kind. Probably many stupid things are being done in the name of extra-curricular activity, but on the other hand much of the growth is sound and solid and represents real worth while achievement. Certainly the attention which is being increasingly centered on these activities augurs well for their continued healthy development. Such activities as the clubs and school paper are the best example of such opportunities in both material and method in that they supplement beautifully the teacher or book-centered, artificial, formal classroom work. Here in the Ohio school for illustration, the Girl Scouts wished to give a tea for a number of the seeing troops in the city. Therefore with that idea decided upon, members of the troop had to discuss various possibilities for the afternoon's program. The final agreement meant that some in the troop had to accede to the wishes of the majority and give whole-hearted support to others' ideas. The selection of a social committee meant careful discrimination in order to secure girls who would be able to meet the responsibilities of the situation. Various girls had to assume the responsibility for the securing of dishes, for the preparation of sandwiches and tea, for decorations, for the reception of the guests and for the expenses. The entire project was filled with various types of responsibilities similar to those found in daily life.

As the child grows into adulthood he carries with him a strong coloration of his thinking on social questions gained from group attitudes. So, if we would have well adjusted children we must expose them to life itself and by indirection rather than direction have them meet situations rather than avoid them. In other words, concrete living activities in the school have a strong tendency to solve maladjustment by assisting the child to find a place in the group.

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job, needs and must have the cooperation of all teachers and supervisors if he is to have the most success in his program. This is true in insistence on correct posture, but it is also necessary for stimulating good sportsmanship. The progressive school teacher will aid the physical director. Even at best the physical education teacher alone, rarely has the time to supervise and direct play to such an extent that the most good will be accomplished.

If we correct these bodily defects, stimulate intellectual eagerness to know the finer, better, truer things of life; if we remove the nervous tension that is the cause of many of the emotional troubles of our blind pupils, and provide the pupils with interesting physical exercises and activities that they will enjoy and use in years to come, they will be healthier physically, mentally, and emotionally.

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church work, give concerts for the benefit of various societies, and attend many of the social functions.

Aside from benefits accruing to individual pupils, this policy has a decided reaction upon the school itself. It has the tendency to elevate the educational standards and to keep them on a par with those of equal rank in the public school system. This requires a teaching personnel of professionally trained teachers who are alert to the present trends in education and who have the ability to adapt them to the peculiar needs of the blind.

During the past session, the Virginia School has made a detailed study of the curriculum building program now being carried on throughout the state under the guidance of the State Board of Education. The aims, understandings, appreciations and automatic responses have been analyzed and evaluated in the light of the specialized requirements of the blind and adapted in such a manner as to harmonize best with similar units of work in the public school system.

As was aptly said by a blind member of the faculty, "In order to compete in a seeing world, a blind man has not only to be as well equipped as his seeing competitor, he must be better equipped." So it is with the Virginia School. She is being subjected to the acid test in presenting her blind students as candidates for admission into the public school system.

Thus, if normalcy is the goal in the education of the visually defective, the "whole child" must be trained in such a manner and degree that he can interpret his environment with success, with pleasure, and with profit. This means that our standards of education in the schools for the blind must keep pace with those in the schools for the visually normal. Then when the transition occurs, the problem will be one of social rather than educational adjustment.

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bles but not so well with real words. In tests of logical memory, equality rather than superiority, seems to be the verdict. It would appear that where there has been a need for special attention, or a motive for retention, the blind have learned to make better use of their native abilities, but that they succeed no better than seeing children might do if equally interested. In memory, as in sen-

sation, compensation is not a gift but the reward of persistent effort.

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Information regarding the use of Federal funds in residential schools for the blind has been received from the Ohio and the Connecticut Schools for the Blind since the publication of the January issue of *The Teachers Forum*. The following facts will supplement those contained in the article "Federal Funds Used in Residential Schools for the Blind" which appeared in that issue.

Mr. W. G. Scarberry, Superintendent of the Ohio School for the Blind writes as follows: "Through the various alphabetical set ups, such as CWA, FERA, PWA, WPA, we have spent for improvements $68,779.28 for the following projects: walks and drives, landscaping grounds, play grounds, complete repair of the old building as to roofs, plastering, floor sanding, etc., relocation of the hospital, decoration of the old building and refinishing of all old furniture. In addition to the above we have, as you may know, spent $175,000 for the construction of two new dormitories and $10,000 to furnish them."

Mr. Gordon Hicks, Superintendent of the Connecticut School for the Blind, has sent us the following information:

"The following is a resume of projects here under various agencies:

"In the spring of 1933 we were able to persuade the Hartford Community Chest that we were eligible under its grants. During that summer there were employed approximately thirty men doing rough and finished grading, sodding, transplanting trees, constructing roads, landscaping, making tennis court, and constructing a poultry house for our girls' 4-H Club. I have no labor figures on this project, but based on an average of all workers at 40c an hour I think $5500 is rather close. The material on this project cost $1500.

"During the summer of 1934, under FERA benefits and supervision, we constructed a front entrance to the main building at a cost of $1050 for materials, and approximately $5000 for labor.

"In January, 1935, under the same grants, all of our interior buildings were re-decorated, including painting, plastering and kalsomining. This cost us $246, and the labor cost was about $1200. In the summer of 1935 another project under FERA resulted in construction of a boys' 4-H poultry house, 500 feet of road, demolition of old buildings, and the construction of a new modern dairy barn and school poultry plant, at a total labor cost of $9960.40. The school spent for materials on this project $5716.40.

"We recognize a large debt of gratitude to the United States Government and the Hartford Community Chest for all these improvements, for which we would have probably waited many years, and some of which might never have been possible."

STANDARD BRAILLE SERIES

Francis M. Kellert

Since the adoption of standard English braille grade two as the uniform braille code to be used throughout the English-speaking world, teachers of braille in schools for the blind in this country have been casting about for some convenient medium through which to present the system to their older pupils. They will welcome Book Three of *Standard Braille Series,* published by the Illinois School for the Blind, Jacksonville, Illinois. This *Series* consists of three separate books, primarily prepared for the use of home teachers who are teaching adult blind people to read braille. However, Book Three is strongly recommended for the use of teachers in residential and day school classes for the blind who are introducing grade two to their pupils for the first time.

Book Three of *Standard Braille Series* comprises eighteen lessons, each contained on one page; a few simplified rules for the use of grade two; and supplementary reading material of interest and variety for the student. Each lesson is divided roughly into three sections. At the top of the page are listed the new signs or abbreviations which are to be dealt with in that particular lesson; then follows a group of lines of disconnected words and sentences illustrating the use of these signs or abbreviations; and finally a short selection for practice in reading. The rules for the use of any particular sign or abbreviation are not given in the text, but reference is made near the beginning of each lesson to the page on which the rules may be found. In this way the teacher is free to use her own discretion as to how much stress should be laid on the actual learning of these rules. It is generally acknowledged, however, that a thorough knowledge of the rules for writing grade two will greatly facilitate ease and speed of reading.

The introduction of all signs is systematic and logical throughout the book. The one-cell contractions not found in grade one and a half are given first. Then follow in turn the initial contractions preceded by dot 5; initial contractions preceded by dots 4-5; initial contractions preceded by dots 4-5-6; final contractions preceded by dots 4-6; final contractions preceded by dots 5-6; final contractions preceded by dot 6; and finally, abbreviated words. This method of presentation should make it easy for the teacher to drill the pupils thoroughly on one group of signs before the next group is taken up.

The two insets found in Book Three of *Standard Braille Series* will be of especial interest to the student. One of these contains a chart of the signs of grade two arranged to the tables in the international handbook; the other lists the signs of grade two arranged in alphabetic order for the convenience of those who may wish to find a sign by its alphabetic index. In each inset there is also found a list of accented letters which are constantly met with in foreign words; as well as a list of the marks of punctuation. After the pupil has become familiar with grade two, these insets will serve as handy reference booklets in which he may easily locate a less frequently used sign or mark of punctuation.

There are several features of Book One of *Standard Braille Series* which may be of interest to those teachers who are faced with the problem of teaching braille to students who have entered school too late for the kindergarten or primary departments, but who must master the system before they can go on with the work of their grade.

Anyone wishing further information concerning Book Three of *Standard Braille Series,* or the *series* as a whole, should communicate with Mr. L. W. Rodenberg, Illinois School for the Blind, Jacksonville, Illinois. As is well known Mr. Rodenberg is an authority on braille, and will doubtless be glad to help anyone who may wish it.

THE TEACHERS FORUM
for
Instructors of Blind Children

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New York, New York

The Editor will not be responsible for opinions expressed in signed articles.

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A. A. I. B. CONVENTION

The thirty-third biennial convention of the A. A. I. B. will be held at the North Carolina School for the Blind, Raleigh, North Carolina, from June 22-25th inclusive this coming summer. A glance at the tentative program indicates that this session will include something of interest for every teacher and administrator engaged in the education of blind children in both residential and day school classes. The theme of the convention program will be "Changes."

More teachers of blind children should avail themselves of the opportunity to join with this group, in order to gain first-hand information of the most recent thought in their chosen profession. One full day of the convention has been set aside for discussion of problems of the classroom teacher. The officers of the A. A. I. B. are trying to build a program that will be of interest to all.

Following are some of the topics which have already been chosen for discussion: "An Ideal Curriculum for a School for the Blind," "Vocational Changes," "Discipline in Schools for the Blind," "Changes in Schools for the Blind," "Twenty Years of Research Administration and Achievements," "The Relationship Between the Residential School and Sight Saving Class Work," "Vocational Guidance," and "Teachers' Qualifications." Reports of the American Foundation for the Blind and the American Printing House for the Blind will also be given. Sectional meetings will also be held for the following groups: Superintendents and Principals, High School Department Teachers, Elementary Department Teachers, Music Teachers, Physical Education Teachers, Industrial Teachers, Sight Saving Class Teachers, and Superintendents' Wives, Supervisors and Matrons.

Officers of the A. A. I. B. are: President, F. E. Palmer, Superintendent of the Iowa School for the Blind; Vice-President, G. E. Lineberry, Superintendent of the North Carolina School for the Blind; and Secretary-Treasurer, B. S. Joice, Superintendent of the Western Pennsylvania School for the Blind. Following are the members of the Executive Committee: Chairman, P. C. Potts, Superintendent of the Idaho School for the Deaf and Blind; J. S. Ganey, Principal of the Alabama School for the Blind; Neta F. Dustin, New York State School for the Blind; John Meldrum, Oklahoma School for the Blind; Harriet E. Totman, Braille and Sight Saving Classes, Cleveland, Ohio; and the President and Secretary, ex-officio.

BRAILLE TYPEWRITERS

A new lot of the American Foundation for the Blind Braille Typewriters has now been completed and is ready for delivery. Manufactured by the L. C. Smith Typewriter Company, these machines are essentially the same as those distributed by the Foundation in 1934. They have been substantially strengthened and minor adjustments have been made which will improve the efficiency of operation. A new and more effective carriage lock has been devised which will keep the machine securely fastened during its transportation.

These braille typewriters are sold by the Foundation at cost. Changes incorporated in the machine, which necessitated new dies, and the rising cost of raw materials and labor, forced the L. C. Smith Typewriter

Company to increase the price of these writers to the Foundation. Therefore, the new price of the braille typewriter to purchasers is $40.00. A carrying case for the machine costs an additional $3.00. Both prices are F. O. B. New York City. Delivery can be made immediately.

The L. C. Smith Company has made arrangements with its branch offices for servicing these machines when necessary at a reasonable price. Attention of *Forum* readers is called to the fact that this service does not include repair on the Hall braille-writers which are still in use.

BOY SCOUT HUTS

During a recent visit to schools for the blind, the Editor's attention was called to the increasing amount of time that is given to Boy Scout work. Of particular interest is the addition of "Boy Scout Huts" to the recreational equipment of the schools.

At the Tennessee School for the Blind a site has been purchased in a heavily wooded spot in the country about ten miles from the school. Through the cooperation of service clubs of Nashville a fine hut has been erected for use not only by the Boy Scouts but also by other students for over-night camping and for school parties and picnics. The "Hut" has become an important unit in the recreational equipment of the school.

The Oklahoma School has also built a large cabin for the use of its scouts and the rest of the student body. It is situated on a high hill overlooking the city of Muskogee and during suitable weather it is in constant use. In the January issue of the *Forum* the construction of a Boy Scout Hut at the California School, through the use of Federal funds, was also reported. The Editor will be glad to hear of others.

Word has reached the Foundation that a braille science journal is to be issued by the Royal Blind Asylum and School, Craigmillar Park, Edinburgh, Scotland. The first number of this journal will be issued in April. Teachers of science in the United States are invited to send any suggestions they may have as to the type of material to be included in this magazine to Mr. C. H. W. G. Anderson at the school in Edinburgh. No mention is made of a subscription price for this publication, but information concerning this can also be obtained from Mr. Anderson.

Our Contributors

W. E. Allen has been Superintendent of the Texas School for the Blind since the resignation of A. C. Ellis in order to accept the position of Superintendent of the American Printing House for the Blind. The Texas School has contributed several articles to *The Teachers Forum* during the past.

R. E. Trudel is instructor of physical training and science in the Tennessee School for the Blind.

Mrs. M. Genevieve Coville has been a regular contributor to *The Teachers Forum.* She has been principal of the Department for the Blind of the Virginia School for the Deaf and the Blind for a number of years.

Dr. Samuel P. Hayes in this issue completes his article on "The Memory of Blind Children." Dr. Hayes is Professor of Psychology at Mount Holyoke College, South Hadley, Massachusetts.

Mrs. Alice C. Chatfield for a number of years has had charge of the primary department in the Ohio State School for the Blind. Mrs. Chatfield was one of the instructors in the summer session for teachers of blind students conducted last summer by the Tennessee School for the Blind and George Peabody College for Teachers with additional financial assistance of the American Foundation for the Blind.

Miss Frances M. Kellert, formerly a teacher of reading and braille in Perkins Institution, is now employed in the offices of the American Foundation for the Blind.

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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SHOE REPAIR AS A VOCATIONAL STUDY IN THE MICHIGAN SCHOOL FOR THE BLIND

Melvin Haslip

Educators tell us that an undernourished child does not do well in school. Similarly, this is true with the graduate who leaves school having absorbed nothing but a quantity of English, history and mathematics. Academic training in itself will not feed, shelter or clothe him; he is undernourished, underdeveloped educationally, and is unlikely to do well when thrown out upon his own resources. Intellectual training is just as important as vocational training, of course, but of what use is it to the individual if he has had no instruction or practice in work of a manual nature? A combination of a certain amount of both is necessary if he is expected to be fit for the job of life. Let it be understood, however, that I do not speak of those who enter, or desire to enter, the professions.

Blind boys, taken as a whole, must learn trades, since it is so vitally necessary that they be able to use their hands. We should, therefore, develop more trades for them, and further promote those already established. It is in this interest that I will endeavor to show you that these handicapped persons *can* learn to repair shoes, proof of which is established by the fact that many of them have learned to operate successfully the sole stitcher, the finisher, the cement press, the stapling machine, the Singer patching machine and the sole cutter and skiver, all of which are rather intricate pieces of machinery. In view of such evidence, it is quite obvious that shoe repairing, as a vocation for the blind, should not be overlooked in the consideration of means whereby they can earn a livelihood. In the course given at the Michigan School for the Blind 600 hours are required for the average student for completion—or the equivalent of class work for three school years. Also, aside from its practicability, the repairing of shoes is a necessity, and most localities afford room for an additional shop.

Forty years ago shoe repair shops were very poorly equipped in comparison with those of today. The equipment to be found then consisted largely of a stitching horse, a patching machine, and a few hand tools. The shop itself was generally shabby, poorly ventilated, and the repairman was none too careful about his personal appearance. In short, the shoe repair shop of the past was far from being attractive.

But things have changed. Today shops are furnished with modern equipment—finisher, stitcher, stapling machine, cement press, patching machines, sole cutter and skiver, and many valuable hand tools, their use combining to create a neat, factory-like appearance in a pair of repaired shoes. The room in which the work is done is kept clean and well ventilated; the waiting room is made most comfortable for the benefit of customers; windows are attractively decorated in such a manner as to sell most effectively the wares and services of the establishment; and the workmen themselves are efficient mechanics, presenting a neat and attractive personal appearance.

As many as forty or fifty years ago a few blind men attempted the repairing of shoes, but found it extremely difficult to finish the edges of soles with a piece of glass and to burnish the bottoms with the old-fashioned burnishing iron. These operations were the greatest obstacles in the path of shoe repairing as a business undertaking for the sightless. Therefore at the Michigan School for the Blind we find modern machinery is a great aid, rather than a hindrance, in learning to repair shoes. By its use the students are not only able to do very satisfactory work, but they can also attain speed and accuracy.

The popular opinion has always been that blind men could not possibly operate power

machinery without being injured. But allow me to dispel all such belief—as yet, we have never had a serious accident. The machines are all adequately guarded, and then, too, in order to accomplish a given operation, the operator must have his hands on the shoe rather than on any part of the machine itself.

Safety is our primary consideration, and in spite of the comparative lack of danger claimed in the foregoing paragraph, the student is carefully shown everything concerning the machine before he ever attempts to operate it. He must know where all belts are located and where to find all moving parts. He must know the location of the motor and where the clutches are to be found. He is shown how to stop the machine, and is emphatically instructed not to be in close proximity to it while someone else is operating it. He is never allowed to put on a belt while the equipment is in motion. He is given to understand that the machine is built with the safety factor in mind, that it *is* safe to operate, but that no machine is safe if used carelessly.

Power machines possess a great attraction for our blind boys, and much interest in the construction, purpose and operation of such equipment is displayed on the part of the students. As their instructor, I am continually besieged by a multitude of interesting questions, some of which are, to say the least, puzzling to me. However, this desire to ask questions is a healthy sign of possible latent ability, and I always make it a point to give as clear and comprehensive an explanation as possible.

The boy who has never been able to see is always fascinated by an electric motor; he derives much joy and satisfaction from having it explained to him. He is allowed to feel of it while it is running, his hand being placed on the motor pulley, in order that he may be given some idea of the speed and power contained in such a machine.

In his instruction, the question, "Do you understand?" is never asked of the student, for the answer will almost invariably be an impulsive "Yes." But if, on the other hand, I ask, "Have I made myself clear?" many times other questions are forthcoming which allow me to make further explanation. And this plan works very well indeed. It is well worth one's while to interest young boys in some form of craft work, and their questions should never be ignored; they should never go unanswered, for therein lies the foundation of their future activity. And the younger the age at which this interest is manifested, the better are the chances for the utmost in its development.

The blind child has to be shown; he must be allowed to feel of things in order to obtain a knowledge of objects and of the meaning of the multitudinous things in the world about him. The normal boy gets his conception of the world largely through the sense of sight, but it is necessary that our sightless ones obtain the greater part of their learning through the sense of touch. Most parents do not understand how to show their youngster, nor how to explain things to him. Hence the progress of the blind child's learning is greatly hampered.

I give my students the privilege of thoroughly looking over all the machinery and of asking all the questions they care to, but when it comes to actual machine operation I require that they be at least twelve years of age. And even after attaining this age it is found that some boys do not possess the ability to make a success of shoe repairing. However, if they want to try it, it is only just that they be given a fair opportunity.

The first thing to be done after having explained the machinery to the boys is to teach them to drive nails. This is done by placing two pieces of sole leather together and laying them on the *last*. The student, having been shown how to hold the hammer, taught the arrangement of the nail tray, and instructed as to how shoe nails are measured (their length, gauge, etc.), now attempts to drive his first nail. I usually find it best to start him off in this instruction with short nails, but it is wise not to require him to

work with short nails for too long a period of time, as the work will assume monotony and he is apt to become discouraged. However, if I see that it is extremely difficult for him to handle very short tacks I allow him to try some of a little greater length, as the longer nails are easier to drive and in allowing him to do this it is quite possible that he will thereby learn more easily how to handle the shorter ones. Thus, if he has any ability at all, it will be but a short time before he can properly drive nails of any length. I do not expect too much of him at the very outset, for it very often happens that he has never before had a hammer in his hand.

If the student encounters more or less difficulty in driving nails, his hands are placed directly over mine, assuming the same shape and position of mine, while I drive one. The idea that the hammer must connect absolutely squarely with the head of the nail in order that it be driven straight, without bending, is best illustrated by placing my hand over that of the student and bringing the hammer down on the leather exactly as he does it, and then repeating the motion, but this time bringing the hammer down as it *should* be brought down. This method gives a clear picture of what I wish to convey to him, while the use of mere words, more often than not, only confuses him.

Now that he has arrived at the point where he can drive nails satisfactorily, the boy is ready for the next step in his instruction. He is given two knives, the lip-knife and the square-cornered knife, and the difference between the two is pointed out to him. The lip-knife is for trimming soles and heels, while the square-cornered knife is used for skiving what remains on the shoe of the old sole at the point where it joins the new half-sole.

The two pieces of leather into which he has been driving nails are now used as material on which to learn how to trim. The knife is first properly placed in the boy's hand, and then in turn placed in cutting position on the leather. Then comes the future shoe repairman's first attempt at cutting or trimming leather. As a rule it is only an attempt and nothing more, owing to the fact that but very few ever at first hold the knife in position exactly low enough to allow it to cut. But after it has been placed in the proper cutting position a few times this obstacle, for the student, is usually overcome. Some of the boys occasionally cut their fingers, but this does not happen often, and soon they are able to handle a knife and trim a sole very satisfactorily.

The next thing to be taken up is the use of the rasp. This tool closely resembles a file; in fact one might properly call it a leather file. It never gives one any trouble and is used but very seldom after the student has learned to operate the finishing machine. It is astonishing to note how well beginners get along with the rasp as soon as the purpose and the manner of handling the implement is understood.

As to beginning of actual working on the shoes, it has been my experience that the best place to start is in the building of men's leather heels. An old shoe that has outworn its usefulness is given the student. Later, when the skill of the student permits, he begins work on the shoes of the students. The shoes of the Superintendent, teachers and employees are also repaired by the boys working in the school shop. He is now told to remove the top lift of leather from the heel. He is then shown how to level the heel preparatory to the placing of a new leather lift. It is first made as level as possible with the rasp, then, if one side of the heel is lower than the remainder, either a piece of scrapped leather, skived down so one edge is thinner than the other, or a piece of skiving, is placed and tacked to the low portion of the heel. This makes the heel comparatively level. Next, a sufficiently large piece of sole leather is placed upon the heel and securely fastened by three nails, one driven near each of the front corners and one near the back.

The job is now ready for trimming. The

jack is—what we term—broken over, and the shoe turned to such a position that the toe is pointing down, the lip-knife then being used to trim the new lift in such a manner that it is flush with what remains of the original heel. Care is taken to retain in the new lift as nearly as possible the same shape as possessed by the old heel. When the trimming is completed the lift must be nailed all around and quite close to the edge. (Whenever nails are used they should be placed at a uniform distance from the edge of the heel or sole, whichever the case may be.)

Incidentally, it might be well at this point to discuss the means by which we accomplish the uniform spacing of nails. We use a little tool known—and appropriately so—as a nail spacer. It consists of a small flat piece of steel about two inches in length and one inch in width, near one end of which, and at just the proper distance from the end, and of the proper width, is a slot which is as long as the desired distance from the head of one nail to the head of the next.

This spacer is placed on the heel or sole in a flat position, letting the end containing the hole, or slot, be even with the edge of the sole or heel. Then the thumb of the left hand is placed on top of the implement with the first finger of the same hand directly on both the end of the spacer and the edge of the leather. An awl, taken in the right hand, is put into the left-hand end of the slot and in the corner nearest the edge of the leather, or in the corner farthest from the edge, according to the desired distance of the row of nails from the edge of the job. After being placed in the correct position the awl is pushed into the leather to a depth approximately equaling the thickness of the heads of the nails to be used. While the awl is still embedded in the leather, the nail spacer is slid forward until the reverse end of the slot comes into contact with the blade of the awl. The spacer is held as before, the awl removed, and the operation repeated time after time until a perfectly uniform row of nail holes is placed the entire distance around the sole or heel. By using a square awl and twisting it a little, while still pressed into the leather, a more pronounced and easily discernible indentation is left. A nail is driven into each of these marks, leaving a perfectly spaced, neat appearing job of nailing. This method is very rapid and can be used on chrome and composition material as well as leather.

To get back to our heel it must now be given the finishing process. On the first two or three heels a student repairs, I require that he do the finishing with the rasp, for as a rule he is more or less nervous and to set him to work on the finisher at once would only add to his unsettled condition, and besides, he should know, just as a matter of course, how to finish with a rasp. Also, if he is put on the finisher at once, then asked to finish a job with the rasp later in his course, one can expect complaints to the effect that the process is slower and that the final results do not compare favorably in smoothness to the machine finished job.

Next comes the step wherein we build a leather heel from the sole up. This is very similar to the first project except that what is known as a ram must be placed all around the edge of the heel base and the proper alignment determined. The alignment is just right when both the heel and the ball of the sole will set level on a flat surface.

A beginner should not be given more of heel construction at this point, it being wise to start now on half-soling projects.

In half-soling a shoe the first thing we do is to select the new half-sole. If ready-cut stock is to be used, the tap is laid on the shoe, which has been placed on the *last,* and, using an awl, a line is drawn across the original sole of the shoe, commencing at the corner of the new tap nearest the heel. The old sole is then removed, being cut off at a point ahead of the drawn line equaling, approximately, the width of the skive, or we might call it the bevel, on the new sole. Next, the square-cornered knife being used, the old sole is skived down to a feather-edge, commencing at the line we have drawn

and terminating at the point where the old sole has been cut off. This will make a perfect joint over which the stitcher will be allowed to sew freely, and at the same time gives the shoe the visible appearance of never having been half-soled, owing to the fact that no increased thickness of the sole is apparent at that point.

If strips of leather, rather than ready-cut taps, are to be used, we lay the strip on the bottom of the shoe, again employ the awl, and draw a line on the leather all the way around the edge of the shoe. The strip is then placed in the sole cutter and the tap cut out according to the line we have drawn. Then we proceed as in the case of the ready-cut tap.

While on the matter of half-soling, let it be noted that regardless of whether strips or ready-cut taps are used, it is imperative that the proper weight of leather be determined. It should be about the same thickness as that of the original sole. A shoe is built to accommodate a certain specified thickness of leather and no other weight should be used.

Now that the new tap is cut out and skived, and the old sole removed and also properly skived, the next procedure is to determine whether or not the shoe's inseam is intact. If this is decided to be in good shape the bottoms of the shoe and of the new sole are thoroughly "roughed" and a coat of rubber cement applied to each. After the cement has dried sufficiently, the tap is stuck in the proper position to the bottom of the shoe and a row of nails driven across the shank, after which the half-sole is trimmed down flush with the welt. If one is a good trimmer it will not be necessary to sand the edge of the sole on the finisher before stitching, but to a man new to the work, such a procedure proves of great aid.

Occasionally, soles are found to stick none too well even though cemented, in which event, "leveling pincers" may be used to squeeze the new tap and the welt of the shoe tightly together, causing them to adhere more firmly to each other.

When the job is ready for stitching, it is well to apply to the sole a sponge dipped in water. By so doing, the leather is softened somewhat, allowing the stitcher to function more freely.

Sole leather comes to us in various sizes and weights. For both men's and ladies' work there are ready-cut taps. And we find two sizes of men's strips—strips eight and a quarter inches wide and thirteen inches wide, respectively. We also get ladies' leather in five and a half and in eleven-inch strips. Material for both ladies' and men's shoes may be obtained in "bends," but this manner of buying leather is almost obsolete today. Hard leather must be tempered in water before using, while the so-called mellow leather does not require this treatment.

In consideration of machinery, we will concern ourselves first with the finisher. We like the Landis finisher very much, for the simple and sufficient reason that it is smooth-running and entirely dependable—there is none of the annoyance of belts coming off when starting the machine.

The protected edge wheel is standard equipment on Landis finishers, another reason why this particular make of machine is a favorite among blind repairmen. There are certain operations wherein the blind mechanic positively must use this type of sanding wheel. The edge trimmer on Landis finishers is also so constructed that it is the most adaptable to the use of a blind man.

I have found the Landis curved needle stitcher to be the best sole-stitching machine for us to use, and for various reasons. It is most dependable, having a lock-stitch device that is fool-proof; it possesses an adjustable work gauge, allowing the operator to stitch close to the edge of the sole, or to place the line of stitching farther in from the edge, as the particular job demands. (This alone is a valuable feature of the machine, as, on what is known as the stitch-down type of shoe the line of stitching must be placed very close to the edge of the work.)

The Landis shuttle is very easy to keep

clean and at the same time not difficult to thread; the stitch regulator is so simply constructed that a child might easily change the length of stitch to be used; the heat control is so arranged that the wax never boils and at the same time is always at the proper temperature and consistency for stitching—a very important point in view of the fact that wax which has once boiled will cause, for the operator, trouble without end. The Landis bobbin winder is entirely automatic, and it is not necessary for one to throw the stitcher out of gear in order to fill the bobbin.

I will attempt an explanation of the necessary procedure incidental to the sewing of a new sole to a shoe. The shoe is taken in the left hand with the bottom or sole of the shoe up, the hand being placed in such a way that the fingers will grasp the shoe on the under side with the finger tips on the upper at the edge of the insole and at the point where the line of stitching is to commence. The right foot is then put on the presser-foot-lever, raising the foot in order that the edge of the shoe may be placed in the machine with the edge of the sole against the needle plate. If the shoe is put in this position and raised slightly, the finger nails will come in contact with the needle plate. Doing this will enable the operator to know whether or not his work is in the proper position. When the fingers are removed the shoe must be slid over the throat of the needle plate, and the presser-foot lowered. This procedure prevents one from sewing the upper fast, and at the same time provides assurance that one is sewing on the welt rather than between the welt and the new sole.

The balance wheel is now backed up from its original position, turning it about half-way around, the clutch lever pressed down, and the machine begins to stitch. In order to know just where we are stitching we place the first finger of the right hand against the right side of the presser-foot, and as the line of stitches progresses, turn the shoe just enough to keep it feeding on the welt, using the finger as a guide. The shoe, of course, must be held in a level position, the heel being raised and lowered as the point receiving the awl and needle demands. We find it best not to run the stitcher at maximum speed, a lowered speed making operation easier for the students and at the same time doing just as satisfactory a job of stitching.

The Landis curved needle stitcher is equipped with an adjustable channel knife which is exceptionally easily regulated, or even removed, in case the job does not require channeling; the awl and needle are easily and quickly replaced; and the oiling of the machine presents no difficulties to the blind operator. The machine, in its entirety, is very adequately guarded, it being practically impossible to injure one's self while operating it.

While in use the needle in our old stitcher would often break, and in case it would bend before breaking, the operator's fingers were very apt to be injured. This danger, however, is entirely eliminated on the Landis equipment.

In view of all these outstanding features I heartily recommend the Landis curved needle stitcher as being the most satisfactory make of sole stitcher for blind men to use.

We have always used the Singer patching machine. It is just as reliable as any other make of patching equipment, and, in addition, it is an advantage to be able to obtain repairs in all cities and towns of any size.

On our patcher we made a slight alteration in construction. The presser-foot originally curved upward in a manner similar to that found on a domestic sewing machine. As a consequence of this we were unable to get our fingers close enough to the needle to guide the line of stitching near the edge of the leather, which is necessary in order to do a neat job. So we cut the foot off at a point four teeth from its back and ground its front extremity down to a point, thus permitting us to use the lower part of our

finger as a guide in feeling along the edge of the leather while the stitching is being done.

To be certain that the two pieces of leather on the shoe we are repairing are properly placed together, or, to state it in another way, to make sure that the old lines of stitch holes come together as they were when sewed at the factory, we place a machine needle in one of the original holes in the outside piece, and then, with the point of the needle, locate the corresponding hole in the under piece of leather, pushing the needle through it, thus bringing the original seams into perfect alignment. The job is then placed in the machine and stitched.

If the lining has a tendency to bunch up ahead of the stitching, the foot is raised and the needle removed from the work momentarily, while the lining is straightened out, then replaced and the stitching continued until the rip is mended.

The students are taught to re-thread the patching machine. In this procedure we use either a Singer needle threader or a piece of picture wire to thread the needle, while picture wire is the only entirely satisfactory thing we have found with which to thread the shuttle. This method works very well, enabling a blind man to thread the machine just as rapidly as can the sighted individual.

The thread for this piece of equipment is manufactured in three standard colors—black, brown, and white—although other shades are obtainable. In order that the blind may be able to distinguish between these various colors, the hole in one end of the spool of black is enlarged, the holes in both ends of the spool of white are made larger, while the brown is left as it comes to us.

The Landis sole cutter and skiver is a very simply constructed and operated piece of machinery. (Incidentally, the sole cutter and skiver is indispensable to the modern shoe repairman.) Aside from oiling it never requires attention. If a thin skive is desired, as in preparing a tap for cement work, it is only necessary to slide a small guide back to the proper point, and then proceed with the skiving. If a feather-edged skive is required, the guide is slid back as far as possible. Thus, the desired result is obtained with a minimum of difficulty. The sole cutter and skiver is not motor driven, but must be turned by hand.

The cement method of applying soles is comparatively new, but nevertheless it is with us to stay, for the results obtained by its use completely captivate the ladies. And why not? As well as being durable, the repair job, when cemented, comes close indeed to having the appearance of a new shoe, and at the same time that old-shoe comfort is retained. About twenty million pairs of ladies' shoes have been manufactured this year, involving the use of the cement process, while more and more shoe repair shops are installing cement presses daily. Some of this equipment, however, is only made to sell rather than to give dependable service. But this holds true in the promotion of any new development.

The cement method we use at the School for the Blind is the oldest, the most advanced, and, we believe, the best on the market—the LAMAC method. (We also use this firm's cement and solvent.) Their *lasts* are adjustable, allowing the operator to fit perfectly any shoe he may wish to re-sole; their rougher is second to none, and their cement is the very best. (Allow me to note, however, that in "roughing" the job it is better that a blind man use a hand brush rather than the rotary wire brush.)

Also, as regards the applying of cement, the blind repairman must use tactics very different from those of the sighted mechanic. The sighted man uses a brush similar to a shaving brush, and this a blind man cannot conveniently do owing to the fact that the cement is so easily smeared over the upper of the shoe. He can, of course, use masking tape, but in so doing the cement is apt to be spread rather unevenly. Therefore, we go about it in the following manner:

We insert the *last* to be used inside the shoe, holding the job in such a position that its bottom is down, and apply the cement with our fingers. The fact that the shoe is held in a "bottom down" position permits any surplus of cement to drop to the floor rather than run over the upper. A coat of cement is applied to both the new tap and the shoe and allowed to dry thoroughly, then another coat is applied. The second coat, however, is not permitted to dry, the sole being immediately pressed firmly to the shoe and two tacks driven just deeply enough to hold it in place while the job is put into the press. Shoes must be kept under pressure about thirty minutes unless electric heat is used, in which case less time is necessary.

To remove the cement which adheres to our fingers we merely use a little of the afore-mentioned solvent. This is the only solution obtainable which will quickly, harmlessly, and most effectively remove sole cement from the hands.

When sufficient time has elapsed the shoe is removed from the press, the two temporarily used tacks are taken out, and the edge of the sole "rough-trimmed" with the lip-knife. The job is now ready for the finisher.

The first operation in the finishing process is that of closely and accurately trimming the sole on the edge trimmer. The shank is then sanded until the joint where the tap and the old sole meet is practically invisible. Then the proper color of ink is applied to the bottom and edges of the sole, unless the job happens to be a white shoe. In this event the edge setter on the finisher is thoroughly cleaned and heated, and the edge of the sole, after being wet with clean water, is rather forcibly applied to the device. In case ink is used, however, it must first dry, then be waxed and "set" on the proper size of edge setter.

The cement process of repairing has proven itself of immense value in more ways than one. It not only gives the repair job a neat, factory-like appearance; and retains in the shoe the old-shoe comfort so much desired by the wearer, but it also is a decided advantage to the repairman as well, for the sufficient reason that ladies' shoes which have very narrow welts are extremely difficult to re-sole by the stitching method, whereas, by the use of cement this obstacle is entirely eliminated. Also, it has been impossible, heretofore, to attain as much of durability in a repair job as is made possible by this comparatively new process. We also find the use of cement to be more satisfactory than any other method when leather toe pieces are desired on a pair of shoes.

Neither the cement nor the solvent used in the sole cementing process is harmful to the hands. However, it does have a tendency to dry out the oil in the skin, so I recommend to my students that in case they are working with either or both substances daily, they use some sort of hand lotion every night to replace the lost skin lubricant.

Shop management is taught my students as being one of the most important phases of their training. A properly arranged shop tends toward a maximum of speed, allows for greater efficiency on the part of workmen, and, making the establishment more attractive to patrons, proves an aid to salesmanship. On the other hand, a poorly planned layout in any mercantile establishment is a decided detriment to business.

Considerable time and attention is given the problem of buying stock. It is vitally important, for the individual's own good, that on opening a shop of his own he understands how to buy material; how to most advantageously select his goods. He must also be able to devise some method of marking or filing his stock in order that he may have ready access to any item upon an instant's notice.

As a supplement to the manual side of the instructions I give, I use a text book dealing with the anatomy of the foot and the theory of shoe repairing. To most people this probably sounds unusual, and, perhaps, unnecessary, but it has been my experience that the repairman who, in talking shoe repairing, speaks of the bones of the

foot by their anatomical names, makes a deeper impression upon his customer. The various parts of the shoe and the material used in its repair all have their proper names, each of which is given and defined in the text.

The successful shoe repairman must be a salesman as well as a mechanic. Therefore, I make it a point to stress this aspect of the business to my pupils. I try to impress upon them that the man who can utilize, as advertising, the opportunities to be found in everyday occurrences is the man who possesses much in the way of sales ability and who consequently is able to further promote his business to the point of success. One man, managing a "semi-sub" shoe repair shop was fortunate indeed that a drunken driver guided an automobile into his display window. He immediately rushed to a sign painter and ordered the caption, "Even the automobiles come to this shop for repairs," lettered and displayed in such a manner that it was visible in the picture the news photographer obtained of the wreckage. This proved excellent advertising for the shop.

I know personally another shop owner who, upon noticing a boy drawing a squeaky hand wagon down the street, called the lad in and gave the vehicle a free lubrication job. It was not long before the youngsters for blocks around were bringing in their wagons and asking for gratis oiling service which, in every instance, was cheerfully given. I asked the man, "Does that sort of thing pay?" and he answered, "It's the very best form of advertising I've found yet." In my own shop I try to take advantage of all such things and I find they pay very well. I always pass them on to the members of my shoe repair classes.

Perhaps you wonder what we do when it comes to making out job tickets. We use a card similar to a shipping tag, upon which, using the braille system of writing, appears the customer's name, what is desired in the way of repairs, the color of the job, when the job is wanted, and what the price is to be. We attach this ticket to the shoe, or pair of shoes, thereby making it unnecessary to depend upon outside assistance in ascertaining the color of the job and what repairs are to be instituted. We are, therefore, self-sufficient in respect to the selection of the proper color of rubber heels, thread, patches, ink, and so on. (In writing these order cards the signs embodied in the braille system of writing for the blind make the job one of little consequence so far as time is concerned.)

It has been found that among our boys those who have opened shops on their own initiative, and who, because of limited financial means have been forced to start with meagre equipment, remain in business only a short time. On the other hand, those who have been fortunate enough to assume the responsibilities of a repair business with the aid of dependable, modern equipment are still at it and doing well, the recent period of major depression notwithstanding. Success in the one case and failure in the other is not due altogether, however, to the difference in the two sets of equipment, but can be laid, in some measure, to the fact that the modern, attractive shop appeals to the public, while the unkempt, out-of-date one is apt to be repulsive. The latter fails to attract and impress trade, bearing out the old maxim, "A first impression is a lasting impression."

Twelve of the graduates of the shoe repair department have engaged in shoe repairing as a livelihood, including three journeymen or those working for others. Of this number six have been forced out of business for various reasons, namely fire, depression and lack of proper equipment. Of this group, however, all were taught on very obsolete equipment. The present modern equipment has now been installed for a little over a year. One student after completing his course in shoe repairing on the new modern equipment, had sufficient capital to open a modern shoe repair shop and has enjoyed a prosperous business from the start.

DOCTOR ALLEN SAYS:

"THERE CAN BE NO CONTINUOUS MENTAL HEALTH AND VIGOR WITHOUT BODILY HEALTH AND VIGOR." (S. G. HOWE.)

Once when the blind boy who became Sir Francis Campbell arose from a bed of sickness all run down, his parents turned him out to pasture among relatives in the Tennessee mountains. Having always loved the out-of-door life he was then in his element, exploring near and far, and mostly by himself. After some months of such adventuring he emerged strong and well again. The experience made him an insistent advocate of physical exercise in the open air as a cult for the blind student who would make the most of himself.

His later eleven years as assistant to Dr. Howe, at South Boston, confirmed this early conviction. When, therefore, he came to lay out the Royal Normal College grounds he did so expressly to promote physical exercise. He gave each group of boys and girls, (or young men and women), an oblong field free from tree or other obstacle, where they could move about with abandon; and he provided them play leaders, in which capacity I was probably very useful to him. All my three years there I led my intermediate boys in running games, jumping, putting the eight-pound shot and even in throwing the hammer (my track event in college). As to walking, since he wished to make this exercise a life-long, free time habit of every pupil, he had framed each playing field with concrete paths, straight and wide, raising the four intersection corners just enough to tell the foot instantly where to turn. Mornings from 9 to 9.30 was "walk hour" for everybody. Each pupil kept tab on his rounds, reporting the number the next day publicly in chapel. There was no loafing on these "walks," for the boy and the girl who had the best score for the year received as prize a gold watch.

On rainy days we resorted to the gymnasiums, of which there were two. One was fitted out with Dr. Sargent's development apparatus, none of which monopolized the floor space, however, since that was often needed for games, marching evolutions, drills, and roller skating. "Mr. Guy," Charlie Campbell's half-brother, instructed the boys there daytimes and the young men evenings. Evening "gym" may have been unpopular; (I know my introduction of it at the old Philadelphia Institution was so). At the College no other time could be spared for it. Moreover, it offered a radical change from the long hours of continuous music or tuning practice, and it acted as a sleep inducer. No posture week was needed over there.

Every week day began for the boys and young men with an early wake-up "swimmer" in the pool, which I supervised. It is said that subsequently when "Charlie" became old enough he usually took a group of eight off before breakfast for a twenty-minute multicycle spin about the neighborhood. The outdoor skittle alleys were noisily popular.

While long and close application to vocational pursuits characterized the College, its physical training activities were not far behind. Overbrook, copying much, had in addition running gallery, inside bowling alley, athletic field and, most constantly used of all, its grand covered cloister system. The Watertown Upper School lacks scarcely any of these except the general cloisters. But the Lower School has even a play cloister for each of its four families of thirty children; and what with the variety of other play attractions, purposely only one of a kind to each group, it secures more spontaneous activity than any similar school I know.

THE VALUE OF ESPERANTO TO THE BLIND

W. Percy Merrick

In many countries the education of the blind, and provision for their well-being have been initiated by the blind themselves. Even today, blind men and women play a very important part in such work in a number of countries, and their great desire is to learn how to overcome difficulties that are common to the blind the world over.

How important it is that workers for the blind should everywhere keep in close touch with one another is shown by the fact that the braille system lay half neglected in France and Belgium for forty years after its invention, and it was not till a blind English philanthropist and linguist, Dr. T. R. Armitage, discovered it and brought it into general recognition that it began to take its rightful place in the world.

But even when braille had conquered Europe there was another great barrier to international communication, the diversity of language. This was so keenly felt by one youth, Harald Thilander, about the beginning of the present century, that he made it his life's work to discover and put into practice a means of international collaboration open to all who would make the effort necessary to employ it. It was the language, Esperanto, which then was beginning to be known among the seeing.

Harald Thilander was then a youth in his teens, blind, very deaf, and so delicate that serious education had been out of the question. His father was dead, and he was an inmate of a home for "abnormals" at Stockholm, where, it was supposed, he would remain sheltered for the rest of his life. But he grew stronger, and developed a passion for knowledge and for action, and a great desire to be of real use to those throughout the world who were blind like himself.

His story is too long to be told here; it is enough to say that by almost superhuman efforts and perseverance he now has perhaps the largest and most progressive braille printing press in Scandinavia.

But let us hark back to the beginning. Thilander succeeded in learning English and French, and in getting correspondents abroad. He soon found that even he could be useful to nearly all his friends by passing on from one to another information of which they were in need, but the work of translation into the various tongues was tremendous. Only in one way, by their all learning Esperanto, could he hope to satisfy their demands. So he taught them Esperanto by sending them, in that language, information that he knew they needed, and by copying for them a small key and vocabulary from which they could learn it. This method succeeded so well that in 1904 he had assembled quite a cosmopolitan group of corresponding Esperantists; and that a prominent seeing Esperantist, Professor Cart, of Paris, started a braille Esperanto monthly magazine, "Esperanta Ligilo" (the Esperanto Link), which now, under the editorship of Thilander himself, has thousands of blind readers in over thirty countries, and a circulation of nearly nine hundred copies a month.

It has always been Thilander's aim to make "Esperanta Ligilo" a real link among its readers. They are made to feel that they belong to one widely scattered family, all willing to help and encourage each other. Through it blind pioneers have been inspired to establish national magazines, schools and libraries in their own small or backward countries. At the annual Universal Esperanto Congresses blind sections have been arranged, at which numbers of its readers have met and enjoyed a week together in perfect harmony and full comprehension. For instance, over fifty from ten countries were entertained during the Congress at Stockholm in 1934 in a way that will cement

lifelong friendships and leave pleasant memories.

From the beginning, one or more readers of "Ligilo" in each country undertook the duty of "Blind Consul," by giving to foreign inquirers any information concerning blind matters that they required. The questions that I, as "consul" for England, have been asked during the last twenty years or more would fill a volume, and tax the resources of an encyclopaedia to answer. Often these relate to blind welfare and amenities provided by the State, but social matters, such as blind scouts, or individual needs, such as, "Where can I get a bobbin for tatting, on which the thread is wound automatically," also form their subject.

Those who imagine that Esperanto is meant to displace national languages may be reassured by the fact that scores of students use it for learning other tongues. One such, a Jugoslavian, recently wrote to ask if he could keep the English-Esperanto dictionary, in four big braille volumes, a little longer than the usual month allowed by our National Library for the Blind in London, as he had not quite learned it by heart!

This Library, by the way, has a good stock of Esperanto literature in braille, which is lent free all over the world.

Of late years a very important movement has sprung up, which is doing much to bring workers for the blind together.

The Universal Association of Blind-Organizations, which has been in existence for four or five years, is a federation linking its members, mainly through Esperanto, but with the use of other languages when necessary. Its Committee consists of seven members from as many different countries, and its indefatigable secretary is Mr. Thilander himself. It has published in Esperanto braille such useful documents as the international music symbols with descriptions of the various details of braille notation now in use; a list of braille alphabets for nearly all European languages, with the letters and marks used by the seeing in

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FOUNDATION LIBRARY

Number 6 of the very helpful bulletins issued from time to time by the National Institute for the Blind in London, England, is entitled "The Care of the Blind Baby." A general outline is given in the pamphlet concerning the early training which should be given to blind children before they enter school. It is recognized that the best environment for the child is that of his own home. If the mother of a blind child, however, finds that she is not able to give all the time and attention that the baby needs, she is strongly urged to consider placing him in one of the residential homes for blind babies which have been established.

The English magazine *Teacher of the Blind* has, during the last year, contained several articles on the teaching of geography in schools for the blind. In the May, 1935 issue we find "Geography—Some Questions Answered" by Leonard Hardcastle. Most of the difficulties met with in teaching geography to blind children have some relation to the preparation and use of maps in schools for the blind. The author discusses the various kinds of maps and gives suggestions as to their manufacture.

In the July and September issues, the same author has carried on his discussions in two articles called "School Geography I and II." These two articles are mainly devoted to discussions of methods of teaching and of the teachers themselves. It is suggested that the proper equipment for teaching geography should include not only maps and globes, but also a properly fitted out geography room which should be about twice the size of an ordinary classroom.

The discussion of suitable maps for teaching geography in schools for the blind is carried on in the February, 1936 issue in the article called "A Pin-table Map" by Maurice Blake. Complete instructions as to how to make such a map are included in this article.

A NURSERY DEPARTMENT AT THE MINNESOTA SCHOOL FOR THE BLIND

Byron L. Berhow

As in other schools, the problem of the new, young child has been a vexing one in the Minnesota School. Quite often the child's previous training and development have been insufficient and at times misguided. Consequently, there has been a lack of progress. Up to a year and a half ago, the Minnesota School for the Blind had no department preparatory for the first grade; as a result some of the children became "riders" or "carry alongs." In general it may be said that the average boy or girl is able to enter the first grade in our type of school and do a satisfactory amount of work.

Our former Superintendent, M. R. Vevle, took cognizance of the situation described above and reported to the faculty of the Minnesota School for the Blind his interest in a paper by Miss Katherine E. Maxfield of Summit, N. J., read at the A. A. I. B. convention in 1934. In cooperation with the Federal Government and our own State Board of Control a nursery school was inaugurated. The F. E. R. A. gave us a teacher; we found a spare piano and a room, and in a short time we were fully equipped and on our way.

We were fortunate in that we were able to secure Miss Adelaide Helppie to direct the work. Miss Helppie had been in sight saving work and was prepared to assume her new duties. Pupils were sought for the department, but only two were secured, at the time, who were below average acceptance age. These two were supplemented with first grade prospective "riders" of which there were three. The group consisted of five pupils having a mental age of less than six years. This met with the requirements of the F. E. R. A. nursery school. The project was based on a provision, also, that we were not to offer work of first grade difficulty to the children, or by the teacher to other children at any time during the school year, 1934-1935.

The plan we now have in effect is more flexible. We still have Miss Helppie in charge of our nursery school work and she has in the meantime been placed on the regular staff of the Minnesota School by Mr. J. C. Lysen, our new Superintendent, who has given much time and study and his wholehearted support to the enterprise.

The main objectives in our nursery school consist of the following:

A. First, to continue with home life.

B. Second, to prepare for entrance into graded school work.

More specifically, we aimed to accomplish the following things:

1. Develop better bodies. This work correlates so closely with mental development that our daily schedule includes items such as walking, talking, singing, handwork, skipping, rhythmic games, rest periods, washing and drying of hands and face, and an infinite number of other duties of the same character. In our physical education work in the nursery school we keep in mind our Danish system of exercises, which follows in later grades.

2. Contact with the world. This work is accomplished by familiarizing the children with the buildings on the campus; they are taught how to get to any specific place alone and to walk and act as normally as possible without the all-too-common mannerisms of blind children. Toys and playground equipment supplement this part of the program.

The above described plan has been in effect one and a half years and we feel that we are in a position to report a few definite results.

1. Three of the five children from last year's nursery school were promoted last fall into the first grade. The other two were too immature for advancement.

2. During the first full year of our

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PHYSICAL EDUCATION IN THE CALIFORNIA SCHOOL FOR THE BLIND

By Charles Buell

Play is recognized not only as an important element in education, but also as an important element in life. In play activities, the child expresses himself freely and spontaneously. Here the teacher or supervisor can study the child's likes, dislikes, strength and weaknesses. Play activities help to form the habits that are necesary for health and happiness in adult life. The boy or girl whose play has been stunted in childhood often passes into adult life handicapped for the struggle to come.

Whatever may be said concerning the importance of play in public schools, it is even more necessary in schools for the blind. It is the tendency of blind people to lead an inactive, sedentary life. Since the vitality of the blind is below normal, playgrounds and physical education are most necessary for the development of children in the schools for the blind. Play not only helps the blind to overcome their fear and helplessness, but also it teaches alertness, courage and skill.

At the California School for the Blind we strive to develop a desire for active, robust play and habits of health and freedom of motion. The gymnasium and athletic field are places to develop companionableness and good feeling rather than arch rivalry. By teaching activities that may be carried on in leisure time, we not only cut down minor delinquency, but present a program that will round out a fuller life and bring more happiness to the blind in adult life. While these objectives are stressed, we keep in mind the objectives of general physical education.

Many leaders of today feel that play is more important than other forms of physical training. In the California School we use very little formal gymnastics because we feel there is nothing in physical education that so helps the blind child as the use of informal games and play. One of the principles for securing the right kind of play for blind children is to have the teachers play with them. Two students who are majoring in physical education in the University of California conduct the physical training activities. In the physical education period, teams are chosen and the teacher may play on one side or he may play for both sides, such as pitching in a baseball game. The instructor gives information on fundamentals and rules of the game as it progresses. This leads to an hour of informal physical training each day of the school week.

Here is a list of our facilities used by the boys:

1. A turf football field and 320-yard running track shared with the California School for the Deaf.
2. Use of the School for the Deaf swimming pool twice a week.
3. Two large rooms where physical training is held in bad weather. These rooms are equipped with mats, stall-bars and a rope for climbing.
4. A playground with two slides, overhead ladder, swings, teeters, rings, rock-a-by and merry-go-round.
5. A 325-foot cement straightaway for skating.
6. A surfaced picnic ground with large fireplace.
7. A boy scout hut.

The organization in the physical education class differs from the ordinary school. The blind must be handled in small groups of not more than fifteen or twenty. We select these groups on a basis of ability rather than the usual weight, height and age scheme. We are forced to do this because ability varies to such a great extent. This is partially due to the fact that the amount of vision of the students varies considerably. There are 60% of our boys who have enough vision to get

around, while the rest are totally blind or nearly so. The physical education class is divided into three groups. The boys from seven to ten years of age use the physical education period to play on the equipment on the playground. The second group consists of boys of high ability who play football, baseball, a kicking game, compete in track and relay racing of various kinds, wrestle and hike. The third group is made up of boys of low ability who play the same games, but not as well. Since there are many younger boys in this group, some children's games are added as well as a few games adapted particularly for the blind. Our boys like to play channel ball and sport X, two games originated for the blind.

Football is played under regulation rules with the exception that the ball must be put in play on the word "hike." When the players are all totally blind, another variation is used. The runner takes the ball from the ground between the center's legs and plunges forward through the line—no end runs, reverses, or passes are permissible.

Baseball is played with a few variations from the regular game. The common way to play is to use the regular rules with the exception that the ball must be rolled on the ground to the totally blind batter. The batter listens to the ball rolling on the ground and hits it. He then runs to a team-mate who is calling him on first base. Another variation sometimes used is, that if a totally blind fielder catches the ball while it is rolling on the ground, the batter is out.

The kicking game consists of kicking a football back and forth. One team kicks off from about the middle of the field, and the ball is kicked back and forth until one team kicks the ball over the goal line in the air. If the ball is not caught, it scores one point for the team making the kick.

In track the boys compete in the dashes, high jump, broad jump, pole vault, shot put and tug-of-war. The latter two events offer no handicap to the blind. In the dashes a whistle is blown at the finish line so that the totally blind runner can get his direction. In the high jump, broad jump, and pole vault, the totally blind boy can be taught the correct form and through practice he gets the right timing for the take-off.

During the winter, one or two physical education periods a week are devoted to wrestling. The boys are taught various wrestling holds. Some of our boys have become proficient wrestlers. As long as a blind boy starts from a referee's hold, he has an equal chance with his sighted opponent. Where there is no danger of injury to the eyes, we allow the boys to box.

Within the last year, we have started to teach the various swimming strokes, a little diving and life saving. It is but little more difficult to teach swimming to the blind than other children. Most of them express no fear of the water. We have arranged a series of three swimming tests, and felt badges in the shape of fish are given to stimulate interest. To pass the first test, or trout, one must be able only to swim on his stomach and back. The second test, or shark, requires a knowledge of the various swimming strokes. A knowledge of various life-saving techniques is necessary to pass the third test for which a felt badge of a whale is given.

There are periods in the day when the children are left to themselves. If the activities of the directed play period are carried over into leisure periods and have resulted in freedom of action, we consider our physical education program a success. Some of these free-time periods are held for intramural contests, and also to train some of our more talented boys for athletic teams. In both intramural and interschool contests participation is voluntary.

Within the last year, we have been developing teams to play against various playgrounds in Berkeley. We have limited our activities to those in which the blind need ask no handicap. Through these activities, we hope to build up a respect for the blind in the minds of our sighted opponents and to discourage the blind from asking for

handicap arrangements when they leave school. This in its small way should help to educate the public about the blind. It also enables the blind boys to make acquaintances and friendships with normal boys. This is of great importance in institutional life. In recognition of outstanding athletic service to the school, we award monograms. The boys receive their awards at a meeting where some athlete or coach from the University of California is the principal speaker.

Last spring our boys successfully competed against Berkeley playgrounds in track. In competition with 30,000 northern California boys, two of our boys won medals in the Junior Pentathlon. The 75-yard dash, high jump, broad jump, shot put and basketball throw made up the five events of the Pentathlon. Our totally blind boys were unable to compete in the basketball throw.

We are now successfully competing in basketball. Of course, each boy must have enough vision to get around. We tried to compete in football, but without asking for handicaps it was not very successful. There are also some swimmers and wrestlers in training who hope to compete against sighted opponents soon.

To make our program ideal, we hope to obtain the following equipment: push ball, medicine ball, punching bag, bowling and gymnastic equipment. Activities using these facilities offer no handicap to the blind.

In concluding this brief survey, let me repeat that the great aim of our recreation program is to develop in the blind child a desire to play and freedom of action that will go with him the rest of his life. We strive to teach the blind children to express themselves normally and naturally, so that they will be better equipped to take an honorable place in society. By teaching activities that may be carried on in leisure time, the physical education program will round out a fuller life and bring more health and happiness to the blind in adult life.

THE TALKING BOOK IN ENGLISH CLASSES

The following letter received by the Foundation from Kenneth D. Longsdorf, instructor in the New York Institute for the Education of the Blind, is indicative of the uses that may be made of the Talking Book in English classes in schools for the blind.

"My dear Mr. Irwin:

"It occurred to me that you would be interested to hear about the use I am making of the Talking Book in my English classes at the New York Institute for the Education of the Blind.

"In the first place, I use the book in all High School classes periodically and for the benefit of *all* the pupils. For instance, just before the Christmas holidays, I had all my pupils hear that superb recording of "A Christmas Carol." They were simply delighted. Several other teachers, hearing the good news, asked to send their pupils to my classes during the periods of the readings.

"In the second place, I actually employ the Talking Book in connection with strictly academic work. As you know, our better pupils at the Institute submit to the Regents examinations of the University of the State of New York. In these examinations paraphrasing poetry plays a prominent part. I give my classes practice in paraphrasing by having them hear your recordings and then by having them write summaries of the poems read.

"In the third place, I have an 'Honors' group, consisting of students who can do superior work and have the *inclination* to do it, which is privileged to hear readings that lack of time in class prevents them from hearing. I use some of the more popular records as a means of rewarding diligence.

"I consider the Talking Book an excellent supplementary aid in teaching literature. It is an ally rather than a rival to braille, and should be so considered. . . .

"I am much interested in the future development of the Talking Book and in the subsequent recordings you will make. I think you have performed a splendid service not only for the blind but also for the teachers of the blind, to say nothing of what the book means to sightless people not in our schools.

Sincerely yours,

(Signed) Kenneth D. Longsdorf."

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nursery school, our children accomplished two or more years of orientation, and are more familiar with their surroundings than any previous group of similar age in recent years.

3. The two youngest children made advancements in mental age beyond our highest expectations. The three older children rated no change in their I. Q. upon being rechecked from last fall, but we find that they are easier to handle and are better socialized. The boy advanced from an I. Q. of 78 to 113. The girl increased her rating from 60 to 83. The boy is in the first grade, but the girl is still too young for promotion. It is understood, of course, that the mental levels of these two children were not lifted because of their nursery school training; their ability to comprehend, however, had greatly increased. We are especially interested in the increases in mental ratings because the tests were conducted by people outside our own school; mental tests were given by Doctors Hales and Herring from the offices of Dr. Kuhlman. There is a possibility that because of our nursery school we will be able to avoid "carrying" some boys and girls, who might otherwise not climb out of the level of high-grade morons.

The lower grade teachers have been relieved of many burdens because of the new department. Furthermore, our nursery school trained pupils appreciate being in groups which do work of their own grade and quality. Our teachers find that the nursery trained pupils fit in very nicely with the first graders. The faculty and matrons for the young children decidedly favor its continuation as a real educational aid.

(*Continued from Page* 93)

relief, and issues a very useful annual report showing the current state of the movement. Already the chief blind organizations of ten countries have joined the federation, while twelve more or less extensive societies of blind Esperantists have also become members. The Association is growing apace, and it bids fair to be of great service, especially to the less advanced parts of the world. Its aim is to promote friendly contact between all who are serving the blind.

Should any reader wish for further information on the subject of Esperanto and the blind, I invite him to write to me in braille, and I will do my best to supply it.

(Editor's Note: Mr. Merrick's address is Penso. Shepperton. England.)

CAMPING FOR THE PHYSICALLY HANDICAPPED

In the *Girl Scout Leader* for April, 1936, appears an article entitled "Camping for the Physically Handicapped." Because of the wide-spread interest of schools for the blind in girl scout work and recreational activities for their students, with the permission of the Girl Scouts, Inc., this article is reprinted in part.

"Authorities, both outside and within the national Girl Scout organization, believe that the Girl Scout outdoor and nature programs hold limitless possibilities of physical stimulus, social adjustment, development, and happiness for the physically handicapped Girl Scout.

"Attempts to provide Girl Scout camping, whether troop camping for a blind, crippled, or deaf group, or by inclusion of one or more such girls in established camp groups, must recognize that problems will be many. To meet these problems there must be:

1. Close cooperation with the authority, or authorities, caring for the child or children: such as the institution head, the physician, the school nurse, the sight-saving class teacher.

2. Trained, experienced, competent nurses and counselors, and more of them than in a camp where eyes and ears, hearts and legs are 100 per cent efficient.

3. A plan that provides for as many needs as can be foreseen.

4. Real Girl Scout camping.

"The cost of camping for the physically handicapped is greater than for ordinary camping. On the other hand, such camping makes an especial appeal.

"Whether a local council or a lone captain

undertakes camping for its physically handicapped Girl Scouts rests entirely with the local group. The national Camp Advisory Staff will welcome inquiries and will be glad to counsel on special problems.

"The captain and local council, the girl's physician, and parents or institution authorities must judge each girl's limitations and possibilities, and whether she should go to camp or share in any suggested camp activity. Decision in each case should consider not only the benefit to the physically handicapped girl herself, but also whether her participation in camp life is entirely fair to the camp group—the other girls, the counselors, the camp directors. . . .

"From many Girl Scout camps come reports of physically handicapped Girl Scouts, one or perhaps two in a patrol, who are masters of their limitation; who have contributed to the camp life; and who have gained health, new skills, and happiness from the experience. But, there are also reports that prove that the limitations and the possibilities of each and every physically handicapped girl must be carefully considered.

"The national Camp Advisory Staff asks that every local council and every lone captain providing any type of camping for physically handicapped Girl Scouts send a full report, and pictures if possible. We are interested in the difficulties and the problems as well as the achievements."

In cooperation with the Ohio State University, Superintendent W. G. Scarberry, of the Ohio State School for the Blind, is carrying on an extensive series of investigations into many problems in the education of the blind child. Many of the studies were presented as theses in fulfillment of requirements for advanced degrees in the Ohio State University. Others are the results of investigations made by committees of the staff of the Ohio School for the Blind. The subjects of these studies will be listed in the September issue of *The Forum.* In the meantime information may be obtained from Mr. Scarberry.

THE TEACHERS FORUM
for
Instructors of Blind Children

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The Editor will not be responsible for opinions expressed in signed articles.

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GENTEEL TABLE MANNERS

MRS. O. W. STEWART

The staff of the Oklahoma School for the Blind, realizing that correct and easy table manners contribute so markedly to the personality and poise of the blind, has adopted the following program which has been found resultful.

To begin with, our two dining rooms (one for boys and one for girls), seating approximately seventy-five students each, are acoustically treated so that the six students at each table can *converse naturally* without disturbing those at nearby tables. A partially sighted student sits at the head of each table, and often the one at the foot of the table has some vision. The plates are placed in front of the head of the table and the meat and vegetables are served by him or her. Since the heads of the tables are responsible for those at the tables, they take pride in training the others in such matters as taking a small helping of everything on the table, and eating correctly. Often some of the most advanced students will ask to be placed at the head of a table of the smallest children so that they may train and inspire them throughout the year. Such unusual work as this is given extra-curricular credit. The two religious organizations of the older students name three of their members each week to return thanks.

At the beginning of the school year a

dining-room committee of three teachers is named. These are each on duty two days a week for the three meals, and they alternate on Sunday. The teacher on duty for the day passes from one dining room to the other ready to suggest a correction or to answer any question from a student. Meanwhile the Matron is in one or the other dining room in charge of the maids who serve the children. These maids, three to each dining room, must be neat and capable and are usually high school graduates of the city of Muskogee.

One year an expert from the city came to us for eight successive weeks, giving a lesson each week covering an entire text on etiquette. This was primarily for the maids and was called a "Home Assistant's Course." The Superintendent, Matron, dining room committee and other teachers joined the class so that all might have the same viewpoint of correct usages. At the completion of the course an examination was held and certificates given. Other years the Matron reads books on etiquette to this group of assistants one evening each week after work hours. In this way tables are neatly and correctly set and the use of silver easily taught to the children.

Some one of the dining room committee talks privately to the head of each table sometime during the month; and in one evening of the last week of the month the three meet the boys and girls in separate groups to read to them from some new text on the "bread and butter" of table etiquette, and to answer questions asked by the students. On the last Monday in each month this dining room committee of three and the Matron meet with the Superintendent to discuss problems and improve methods. Detailed minutes are kept of these meetings.

The Home Economics Department, in which each girl is enrolled, is of great assistance. For the younger ones, neatness and correct posture is gained; and for the older ones an understanding of the balanced meal, the duties and pleasure of being a hostess, and the consciousness of correct knowledge.

This year the senior boys are enrolled in a course of Applied Science which they thoroughly enjoy. They learn the kind and cost of food, balanced meals, the correct table service, and even the actual preparation of fundamental foods.

The faculty and supervisors have a separate dining room, but through the year the students take much pleasure and pride in inviting Superintendent, teachers, and supervisors to dine at different tables, playing the perfect host or hostess.

One year our students in high school and the grades took the "Test of Knowledge of Social Usage" for junior and senior high schools by Strang, Brown, and Stratton of Columbia University. The test consisted of one hundred questions. Our students scored unusually high; so that we feel the results are well worth the extra effort.

Our Contributors

Mr. Melvin Haslip is instructor of shoe repair at the Michigan School for the Blind. Mr. Haslip also has the additional background of experience in conducting his own shop, although he is without sight.

Mr. W. Percy Merrick has been for many years a member of the Council of the National Institute for the Blind and is Treasurer of Esperanto Ligilo and of the Universal Association of Blind Organizations. Mr. Merrick is without sight.

Mr. Byron L. Berhow is Principal of the Minnesota School for the Blind.

Mr. Charles Buell is Director of Physical Education of the California School for the Blind.

The editorial for this issue is written by Mrs. O. W. Stewart, Superintendent of the Oklahoma School for the Blind. At this institution they have made a special study of table manners and methods of training the children.

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